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After Action Report

The 1995 Missouri Flood

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Prepared by
State Emergency Management Agency (SEMA)

Mel Carnahan
Governor

Jerry B. Uhlmann
Director

STATE OF MISSOURI

EMERGENCY MANAGEMENT AGENCY

DEPARTMENT OF PUBLIC SAFETY
OFFICE OF THE ADJUTANT GENERAL

P.O. Box 116
Jefferson City, Missouri 65102
Phone 314 — 526-9100

The 1995 flooding was the third consecutive year, Missouri Governor Mel Carnahan asked President Clinton for Presidential Declarations for Public Assistance and Individual Assistance. The 1993 Flood was termed a 500 year flood and in the mind of most Missourians a once-in-a-lifetime event. As the mayor of Ste. Genevieve so simply stated, "I must have aged 300 years since 1993."

Learning from the disastrous floods of 1993 and 1994, Missouri put many of the lessons learned from the earlier flood response, recovery and mitigation issues into use in the 1995 flood. Local emergency managers and their elected officials were able to respond quicker and more effectively than in previous flooding years. They were able to provide damage information quicker and faster to officials preparing teams to survey damaged public property. State agencies emergency response personnel cooperatively worked on flood response measures and resource management in the State Emergency Operations Center located in the SEMA offices.

The flood damaged public infrastructure and public facilities. The cost to the taxpayers was substantially less in the 1995 flooding than the preceding two years. Mitigation projects for public infrastructure paid off in the 1995 flooding. In terms of human suffering, over 37,000 Missourians sought assistance in 1993 and 1994 compared to a little over 4,000 Missourians seeking assistance in the 1995 flooding. Missouri citizens were also better prepared. Many citizens still living in the floodplains purchased flood insurance to protect their property against future flooding losses.

Perhaps, one of the most successful lessons learned and implemented from the 1993 flooding was the Missouri Community Buyout Program. Forty-four communities participated in the 1993 Buyout Program moving citizens out of harm's way in the floodplains. The farsighted vision and success of this program saved taxpayers untold millions of dollars in federal flood insurance claims, Individual Assistance claims, and grants for temporary housing for citizens evacuated from their homes. The local communities must be congratulated for making this program work so successfully in Missouri. The 1995 flooding was the third highest flood of record for these communities. Citizens, who previously been repeatedly flooded, were living in safe and secure homes outside the floodplain.

This report chronicles the 1995 flooding response and recovery local, state and federal efforts. The lessons learned and recommendations by the State agencies point to the fact Missouri is beginning to manage the floodplains. However, Missouri can not afford to sit on the laurels from the 1993-95 flood fighting efforts. Missouri must make a concerted effort to manage the floodplains, address levee issues, mitigate against future flooding and continue to protect our most precious resource -- Missouri's citizens and their property.

Jerry B. Uhlmann,
Director

What is Emergency Management

What Is Emergency Management	3
This Disaster	4
Response Operations	5
Local Response	5
State Response	5
Federal Response	6
Agriculture, Heat Crisis & July 4 Tornado	7
Recovery Operations	8
Individual Assistance	8
Public Assistance	8
Recovery Partnership	9
The Response	9
The Recovery	10
Hazard Mitigation	10
Interagency Hazard Mitigation Team Report	10
State Hazard Mitigation Plan	11
Hazard Mitigation Grant Program	11
Missouri Community Buyout Program	11
Activity Log	13
Local Government Response	19
Callaway County, Cape Girardeau County	19
DeKalb County, Hermann & Gasconade County, Jackson County	20
Office of Administration	21
Divisions of Budget & Planning, Facilities Management, Surplus Supply	
Department of Agriculture	22
Department of Conservation	24
Department of Corrections	25
Division of Adult Institutions	
Department of Economic Development	26
Office of Railroad Safety, Community Development Block Grant Program	
Department of Natural Resources	27
Divisions of Environmental Quality, State Parks	
Department of Elementary and Secondary Education	29
University Extension	30
Department of Health	31
Missouri Highway & Transportation Department	32
Department of Labor and Industrial Relations	33
Divisions of Employment Security, Labor Standards	
Department of Mental Health	35
Department of Revenue	36
Department of Social Services	37
Divisions of Family Services and Aging	
Department of Public Safety	38
Divisions of Fire Safety, Missouri State Highway Patrol, Missouri Water Patrol	
Office of Adjutant General	39
State Emergency Management Agency	41

This document was produced by the Missouri State Emergency Management Agency (SEMA). In the Lessons Learned section, local and county emergency management directors and elected officials responded to SEMA's request for information. State agencies who participated in the flood response and recovery provided SEMA with their information for this report.

What Is Emergency Management?

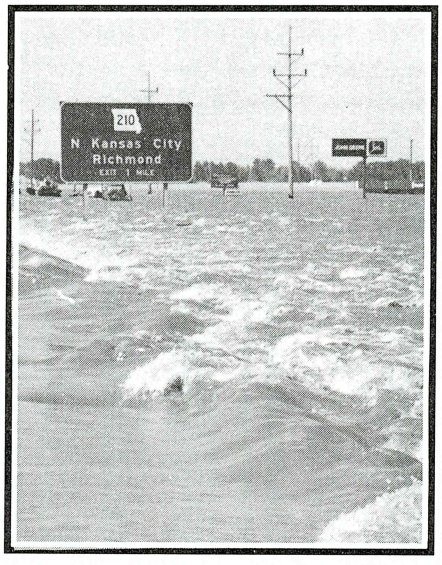
An emergency is a disaster that local (city or county) responders can control by using their resources. A disaster is a dangerous event causing significant loss of lives or property. A disaster demands a response beyond the scope of any single agency or service, such as the fire or the police department. A disaster requires local, state and sometimes federal resources to save lives and property.

Preparing for emergencies and disasters is, by law, a joint responsibility of local, state and federal governments. Local elected city and county officials, their administrators, public safety, legal and health personnel have defined day-to-day operational duties. They are also responsible for responding to emergencies and helping develop the local emergency response plans.

Most jurisdictions appoint an Emergency Management Director (EMD) to plan for and coordinate local actions in an emergency. Many jurisdictions also have mutual aid agreements with adjoining jurisdictions that allow for backup fire or law enforcement assistance.

Once local officials determine they do not have the resources to respond to an emergency, the senior elected official contacts the State Emergency Management Agency to request additional assistance from the Governor. If the Governor determines all local resources have been exhausted, he may declare a State of Emergency (SOE). A State of Emergency frees state agency resources to assist the local jurisdiction with their disaster response.

During a disaster, the State Emergency Management Agency (SEMA) is responsible for coordinating the response, recovery and allocation of resources between local officials and State agencies. Normally, SEMA works with State agencies and local officials for emergency preparedness training and develops a State Emergency Operations Plan (SEOP). The SEOP outlines how State agencies and State resources will be used in a disaster. SEMA also works with local governments and State agencies to identify and mitigate hazards (both natural and man made) before the next similar disaster. Mitigation may be as simple as installing culverts to keep roads from washing out or as complicated as a statewide voluntary buyout program moving people out of the floodplain.



By Mo. Highways & Transportation

When a disaster exceeds State resources, the Governor is responsible for making a request to the President for a federal disaster declaration. If the declaration is issued, the Federal Emergency Management Agency (FEMA) is responsible for coordinating the federal response to the disaster as well as overseeing the administration and distribution of federal monies. A Presidential Declaration makes available a wide range of assistance to individuals, small businesses, certain non-profit organizations, local and state governments. Some of the assistance programs available to citizens, local and state officials include the SBA, USDA, Federal Highway Administration, U. S. Department of Education, U. S. Department of Health, U. S. Department of Housing and Urban Development, and the EPA. FEMA administers temporary housing and minimum repair programs under the Individual Assistance Program and funds hazard mitigiation projects under the Public Assistance program.

Emergency management is a cycle. The cycle goes from preparedness, disaster response, recovery, hazard mitigation, and finally back to preparedness. Past disasters shape how local, state and federal governments respond to future disasters. Officials learn what response and recovery measures work, then develop mitigation and preparedness measures to meet future disaster needs. The purpose of this document is to complete the cycle by assessing the level of preparedness, the response and recovery, as well as, hazard mitigation issues associated with the 1995 flooding. This document reports what happened and allows State agencies to share their lessons learned from the 1995 flooding and how they plan to serve Missouri's citizens better in the future.

The After Action Report was prepared by the State Emergency Management Agency with input from each of the response, recovery, and hazard mitigation State agencies and some local jurisdictions involved in the disaster. History is an excellent teacher. Many of the lessons learned from the 1993 and 1994 flood events were put into practice in the 1995 flooding. However, no matter how prepared Missouri becomes to react to disasters, we can all learn from our past actions to become better prepared for the future. Emergency Management is about the SAFETY of Missouri's citizens and their property.

The Disaster

In April 1995, the National Weather Service (NWS) was asked to predict the probability of a flood of the magnitude of the 1993 Great Summer Flood. At that time, the winter snow melts in the mountains had already passed through Missouri to the Mississippi River. The ground soils were not saturated. Based on that information, the NWS cautiously said the weather conditions did not indicate a flood unless there was widespread and sustained rain.

Widespread and heavy rains in Nebraska, Kansas, Iowa and western Missouri in early May all contributed toward the Kansas City Corps of Engineers issuing a Flood Event for the Missouri River on May 8, 1995.

According to Wayne L. Decker, State Climatologist and Weather Consultant with the University of Missouri Extension, "Above normal rains occurred in all sections of Missouri throughout the month of May. The heaviest amounts occurred in the period beginning on May 16th and extended to the end of the month. The largest rainfalls were experienced in the northern two-thirds of Missouri. Total rainfall in May for these areas ranged from 10 to nearly 11.5 inches. Flashflooding and severe weather occurred in many communities. This resulted in sharp rises above average flood stages on both the Missouri and Mississippi Rivers and their major tributaries."

He pointed out in southern Missouri, the rainfall varied between 5 inches in the boot heel to 7.5 inches in southwest Missouri. While this was considerably less than the amount of rain experienced in the northern half of Missouri, Southern Missouri experienced 1.5 times the normal long term averages for May.

Flooding reports for communities along the Missouri River in the early part of May grabbed headlines. At the confluence of the Missouri and Mississippi Rivers in St. Charles County, emergency evacuation measures were being publicized as early as May 9. Flooding from the Illinois River caused the Mississippi River to rise above St. Louis. The State monitored flooding from communities south of St. Louis to the boot heel from late May through June. Neither the Missouri nor the Mississippi Rivers returned to normal river stages until late June.

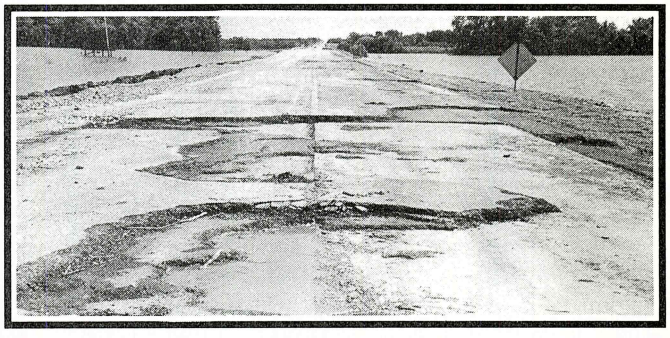
On May 7 and 8, 1995, considerable wind damage occurred in southwest Missouri. Thunderstorms and high wind caused damage in Barton, Greene, Newton, Cedar and Miller Counties. On May 13 a possible tornado destroyed property in Scotland and Clark Counties. On May 17, high winds caused damage in Iron and Madison Counties with an unconfirmed tornado in Fredricktown.

On May 17, Missouri Governor Mel Carnahan issued a State of Emergency based on the severe weather and flooding reports throughout the state. The SOE freed up State agency resources to assist local response efforts across the state.

On May 26, Governor Carnahan requested federal assistance from President Clinton. Carnahan based his request for assistance on the following facts, Missouri had sustained 3 flood periods in 1993, a flood period on 1994, an ice storm in 1994 and were in a current flood response mode. Additionally, previously damaged and newly repaired non-federal levees were in danger of overtopping or breaching.

June 8, 1995, the COE announced they would be releasing excessive waters from the upstate reservoir storage system into the Missouri River to keep those systems from overtopping. Upstate COE officials assured Missouri that the water releases would be controlled and very slow into the Missouri River. These releases would not adversely effect the Missouri River flooding or the communities that were in an emergency response mode. The COE assured Missouri, the Missouri River would be at flood stage until the middle of June.

Heavy rains impacted Missouri's agricultural community. Planting spring crops (corn, soybeans and sorghum) in the northern two-thirds of the State was non-existent. By the end of May, the Missouri Agricultural Statistic Service reported between 5-20 percent of the corn crop had been planted in northern Missouri and 20-35 percent had been planted in the central region. Normally 80 percent of the corn crop is planted before June 1. The continued wet weather caused potential damage to the wheat crop, and delayed the first alfalfa cutting.



By Mo. Highways & Transportation

On June 2, 1995, President Clinton issued a Presidential Declaration for Public Assistance for 12 Missouri counties. On June 12, President Clinton issued a Presidential Disaster Declaration for Individual Assistance for 24 counties and the City of St. Louis. By the close of the incident period on June 23, 1995, Missouri had 61 counties and the City of St. Louis declared for Individual Assistance and 43 counties declared for Public Assistance.

Response Operations

The Flood of 1995, was the second largest flood of record in many areas of Missouri and the third largest flood in others. The floods of 1993 especially the Great Summer Flood was termed a 500 year flood. Many local officials and citizens felt they would not have to face a flood anywhere near the magnitude of 1993 for a long time. However, a 500 year flood by definition has a 1 in 500 chance of happening every year. As the mayor of Ste. Genevieve said in a radio interview, "I must have aged 300 years since the flood of '93."

Severe weather and flooding conditions were widespread over the State throughout much of May. Communities along the Missouri River experienced a sense of "Deja Vu" following the three floods in 1993 and the one 1994 flood. As river levels rose in the western part of Missouri, communities downstream watched and started making preparations for flooding in their areas. Mississippi River communities south of Ste. Genevieve, at first, were incredulous thinking the river would not go out of flood banks. However the combination of the Illinois, Ohio and Missouri River flooding did in fact cause the Mississippi to flood.

Local Response

On May 8, the Kansas City COE contacted the SEMA Duty officer to declare a flood event on the Missouri River. Five levee projects on the Missouri River which have not been completely rehabilitated were monitored. The St. Charles County Emergency Management Agency began issuing flood warnings for low lying areas in the county along the Missouri and Cuivre Rivers. On May 13, a series of severe storms through southwestern Missouri moved up and across to Central Missouri - one community, Nevada, in Vernon County sustained major damage to property when a tornado ripped through the city. Approximately 24 counties called the SEOC reporting flashflooding conditions. Sandbagging efforts have begun in some Central Missouri River communities. Communities in the St. Louis area were preparing for flooding conditions. Bagnell Dam opened the flood gates to lower the reservoir levels in anticipation of more rainfall.

By May 17th, more than 45 counties across Missouri suffered from road closures and flooding conditions. Sandbagging operations were in full swing. Some levees along the Missouri River are in danger of overtopping, this prompts evacuations. A 12" rain caused sheet flooding in St. Louis, citizens in Hazelwood and Maryland Heights are evacuated. The American Red Cross sets up emergency shelters. Communities on the Mississippi River are also reporting flooding problems.

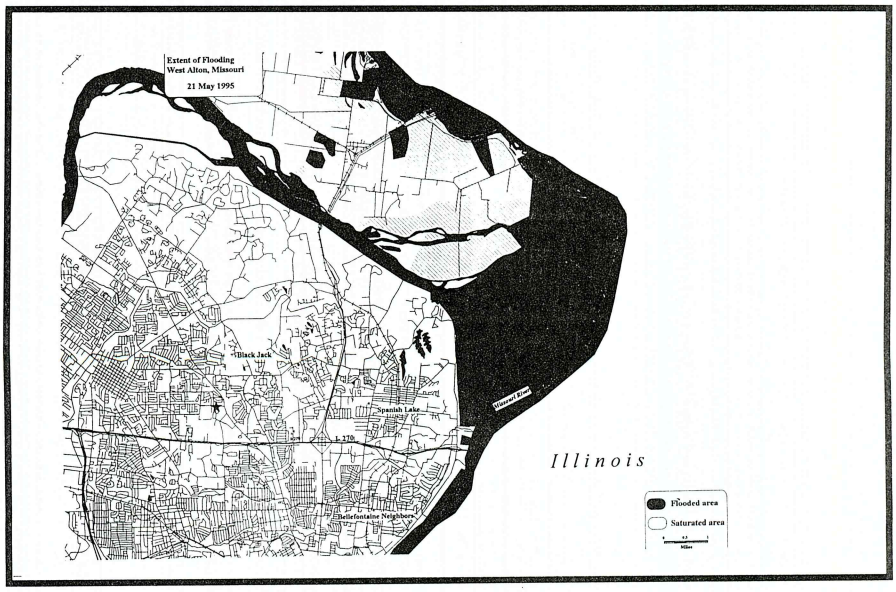
NWS predicts flood crests about 10 feet over flood stage along the Missouri River.

State Response

On the afternoon of May 17, Governor Mel Carnahan declares a State of Emergency (SOE) for the flooding and severe weather statewide. This SOE frees state agency resources to assist local floodfighting efforts. SEMA opens the State Emergency Operations Center and begins 24-hour operations. One of the first agencies to respond is the Department of Corrections. More than 20 inmates assist with sandbagging efforts to save the Jefferson City Airport - their efforts fail as the river claims the airport on the evening of May 17.

The Missouri Highway and Transportation Dept. is actively engaged in preventive measures such as rock hauling and erecting barriers to keep major highways and bridges open. More and more highways are closed due to the statewide flooding.

The Governor also activated the Missouri National Guard to provide security for Nevada. As the flooding worsens, the Guard will provide security for Festus/Crystal City,



Digitized map transposed from satellite photo via FEMA, D.C.

lighting assistance for Kimmswick sandbagging operations, technical assistance for levee problems in Ste. Genevieve, and a rafting operation in Portage Des Sioux.

On May 18, the first two confirmed fatalities directly related to the flooding are reported -both deaths are vehicle accidents. Before the end of the incident period on June 23, there will be a total of five fatalities directly attributed to the flooding. The other three deaths are all drownings - people trying to swim across flooded waters.

On May 20, the Kansas City COE reports all non-federal levees with the exception of the Cole Junction levee at Jefferson City have been overtopped or breached. They are closely monitoring all federal levees on the Missouri River. Major railroad lines are under water impacting eight different railroad companies in Missouri.

DNR and Department of Health monitored drinking water systems threatened by the flooding. The HAZMAT Emergency Response Teams established three sites for orphan containers. There were not as many floating hazardous material containers to retrieve as in 1993. Apparently the Governor's Task Force on Floodplain Management's recommendation that all propane tanks be removed from the floodplain was observed by local communities.

Federal-State Preliminary Damage Assessment Teams begin surveys in St. Charles, St. Louis, Jefferson, Gasconade and Lincoln Counties to find information that will be used to support a request for federal assistance.

The first Missouri River crest was on May 21. However rainfall on May 26, causes the NWS to predict second river crests on both the Missouri and Mississippi Rivers. A slow moving storm front on May 27, prompts the NWS to issue a third predicted river crest for early June.

On May 27, 1995, Governor Carnahan asked President Clinton for a Presidential Disaster Declaration for flooding in Missouri.

Federal Response

On June 2, 1995, President Clinton issued a Disaster Declaration for Public Assistance for 12 counties. They were: Benton, Boone, Cole, Franklin, Gasconade, Jefferson, Johnson, Miller, St. Clair, St. Charles, Ste. Genevieve and St. Louis Counties.

The Federal Emergency Management Agency (FEMA) implemented the Federal Response Plan and sent an emergency response team to St. Louis to establish a Disaster Field Office (DFO) and coordinate mission assignments. State and Federal Preliminary Damage Assessment Teams continued to visit communities to record damage to public infrastructure and buildings. A PDA team canvased the original 12 counties to record human services information in preparation for a possible Disaster Declaration for Individual Assistance.

Based on information gathered from the PDA team focusing on human services, President Clinton amended the Disaster Declaration on June 12, 1995 to include Individual Assistance for 24 counties and the City of St. Louis. The 24 Counties were: Benton, Boone, Callaway, Cape Girardeau, Carroll, Clark, Cole, Gasconade, Franklin, Jefferson, Johnson, Lincoln, Miller, Mississippi, Montgomery, Osage, Ray, Scotland, Scott, St. Charles, St. Clair, Ste. Genevieve, St. Louis and Vernon Counties.

Individuals and small businesses effected by the flooding used the national FEMA 800 tela-registration phone number. Disaster Application Centers (DAC) were not set up across the state. However based on predicted numbers in the St. Louis City and County area, FEMA opened a Disaster Recovery Assistance Center (DRAC) where citizens who had already applied via tela-registration could track their application or talk with some State Agency personnel from the St. Louis area about state assistance. The DRAC also featured a telephone bank for calling the Tela-registration numbers, if an applicant did not have a personal telephone.

SEMA's Public Assistance Program set up a series of Public Officials Briefing to update public officials on new federal regulations and to accept an official Notice of Interest from local jurisdictions for possible project funding.

The official incident period for Disaster 1054 was from May 13 - June 23, 1995. By the end of the incident period, 61 Counties and the City of St. Louis had received an Individual Assistance Disaster Declaration and 43 Counties had received a Public Assistance Disaster Declaration.

Of the 61 Counties and the City of St. Louis which received an Individual Assistance Declaration the following 18 were designated for Individual Assistance only. They were: Adair, Barton, Camden, Cass, Dallas, Jackson, Jasper, Lewis, Lincoln, Maries, Morgan, New Madrid, Newton, Osage, Pemiscot, St. Francois, Scotland and Scott.

The following 43 Counties received both a Public Assistance and an Individual Assistance Disaster Declaration. They are: Andrew, Atchison, Barry, Bates, Benton, Boone, Callaway, Cape Girardeau, Carroll, Chariton, Clark, Cole, Cooper, Daviess, DeKalb, Franklin, Gasconade, Gentry, Henry, Howard, Jefferson, Johnson, Lafayette, Linn, Macon, McDonald, Mercer, Miller, Mississippi, Moniteau, Montgomery, Nodaway, Perry, Ray, St. Charles, St. Clair, Ste. Genevieve, St. Louis, Saline, Stone, Sullivan, Vernon and Warren.

The Agricultural Disaster, Heat, and July 4 Tornado

The Agricultural Disaster

The continuing and constant May, 1995 rains across Missouri impacted agriculture by delaying the planting of spring crops such as corn, soybeans and sorghum until well after June 1. Continued wet weather conditions significantly impacted the wheat crops with diseases. The wet weather also delayed the first cutting of alfalfa.

The Missouri Agricultural Statistic Service reported that between 5-20 percent of the corn crop had been planted in north Missouri and between 20-35 percent of the crop in central Missouri had been planted by the end of May. Normally 80 percent of the corn crop is planted by June 1. The service also reported that much of the flooded areas in the alluvial regions would be idle for the 1995 growing season as was the case in 1993.

State Response

On June 12, 1995, Governor Carnahan requested an Agricultural Disaster Declaration from the U. S. Department of Agriculture for 57,000 Missouri farmers unable to plant crops and with over 730,000 acres of land affected by the severe weather and flooding.

State agencies working closely with farmers included Department of Agriculture and University Extension Service.

Federal Response

On June 12, 1995, President Clinton amended the Missouri Disaster Declaration to include Individual Assistance. Farmers are considered self-employed and as such do not qualify for state unemployment disaster benefits. The Individual Assistance Declaration allows farmers and self-employed businesses to qualify for federal disaster unemployment benefits.

On July 7, The U. S. Department of Agriculture announced a Presidential Declaration for farmers in 107 Missouri counties suffering from losses from severe weather and flooding. This triggers crop loans for farmers.

Heat Crisis

The Missouri Department of Health issued three statewide Heat Alerts during the Summer of 1995. A Heat Alert is issued when the Heat Index is 105 degrees for two or more days over a large portion of the State. Alerts were issued for the periods of July 12-17, 1995, July 29-Aug. 1, 1995 and Aug. 9-22, 1995.

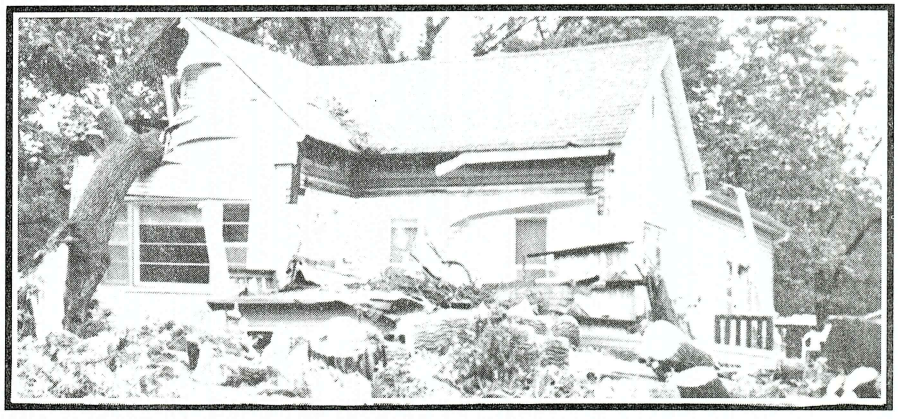
There were 819 heat related illnesses and 62 deaths statewide reported to The Department of Health in 1995. 1995 was truly a killer summer when compared to 277 heat related illnesses and 14 heat related deaths in 1994.

State Response

The Department of Health issued a series of press releases on heat stroke, heat exhaustion and what to do to prevent heat illnesses

The Department of Social Services, Division of Family Services instituted the Low-income Home Energy Assistance Program **loaning** fans or air conditioners to low income families.

The Department of Social Services, Division of Aging activated the HOTLINE number to report elderly suffering from heat, needing assistance, or information on the closes senior cooling center.



July 4 Tornado

A tornado hit Moberly at approximately 7:30 p.m. injuring 15 people, 13 of whom were treated and released from the local hospital. The courthouse, 25 businesses and approximately 300 families were affected by the tornado.

State Response

On July 6, 1995, Governor Mel Carnahan issued a State of Emergency (SOE) for Moberly and Randolph County. The SOE freed up State agency resources to assist the local recovery efforts.

State agency response included: the Missouri State Highway Patrol security mission; the Mo. Highways & Transportation cleared state highways into Moberly and in Randolph County; the Mo. National Guard debris removal mission in Moberly; the Dept. of Natural Resources issued debris burning permits, waived state tonnage fees and allowed yard waste in landfills, and provided technical assistance for disposal of transite-siding containing asbestos; and the Dept of Economic Development assisted with unemployment training and Summer Youth Program workers assisted private citizens with cleanup.

Federal Response

Because the tornado hit Moberly ten days after the close of the Disaster 1054 incident period, this event did not qualify to be included in the Disaster Declaration for either IA or PA. On July 14, 1995, the Small Business Administration announced there was an SBA Declaration for Randolph County and the contiguous counties of Audrain, Boone, Chariton, Macon, Monroe, Howard and Shelby resulting from the July 4 tornado. The SBA Declaration provides low interest loans to businesses and homeowners and economic injury low interest loans to businesses in Randolph and the contiguous counties.

Recovery Operations

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended), is also known at the Stafford Act. The Stafford Act provides the framework for disaster assistance programs.

Individual Assistance

In the Individual Assistance (IA) Program, FEMA provides the following assistance to individuals and families:

- Temporary housing for victims whose homes are uninhabitable.
- Minimum essential repairs
- Disaster unemployment assistance
- Legal services
- Insurance counseling and assistance
- Social Security assistance
- Veterans assistance
- Taxpayer assistance
- Crisis counseling.

Section 408 of the Stafford Act authorizes the President to provide grants to the States to meet disaster related expenses for individuals or families adversely affected by a major disaster where they can not recover from the disaster losses. This is known as the Individual and Family Grant Program. IFG funds are distributed provided the State is willing to make available a 25% match of the awarded grant.

Individual and Family Grants (IFG) are administered by SEMA. The maximum IFG grant in Disaster 1054 was $12,600. The IFG grants were for the replacement or repair of personal property, personal transportation, funerals, dental or medial disaster related expenses.

Following the June 12, 1995 Declaration for Individual Assistance, FEMA stated applicants wishing to apply for assistance had to use the 800 tele-registration number. Applicants gave the following information: address at time of disaster, current address if different, current telephone number, give specific directions for an inspector to come view the property, their social security number, and insurance information. FEMA contract inspectors viewed the property and sent the information in for processing.

In past disasters, FEMA opened Disaster Application Centers in the community to take the applicant information. However, because the tele-registration was to be used exclusively in Missouri, FEMA set up a Disaster Recovery Assistance Center (DRAC) in the Jennings-Ferguson area. Over 100 people went to the center to track their application process, obtain information on SBA loans or state assistance. FEMA also sent a mobile Disaster Recovery Assistance Center (DRAC) to 9 different locations in Southeast and Central Missouri. Approximately 60 people sought assistance tracking their application process from the mobile DRAC.

When an individual or small business applies for disaster assistance, the application automatically is reviewed by the Small Business Administration (SBA) for funding. The SBA approves low-interest home and personal property loans to individuals, property and equipment loans to small businesses and economic injury (for ongoing and fixed expenses i.e. rent, utilities, salaries, etc.) loans to small businesses.

If an individual does not get an SBA low-interest loan, the application is automatically forwarded to the Individual and Family Grant Program. As was stated earlier, the IFG program provides assistance for repair or replacement of personal property or personal transportation, funerals, dental or medical expenses related to the disaster.

As of October 26, 1995, 4,408 Missourians applied for disaster Individual Assistance via FEMA national tele-registration.

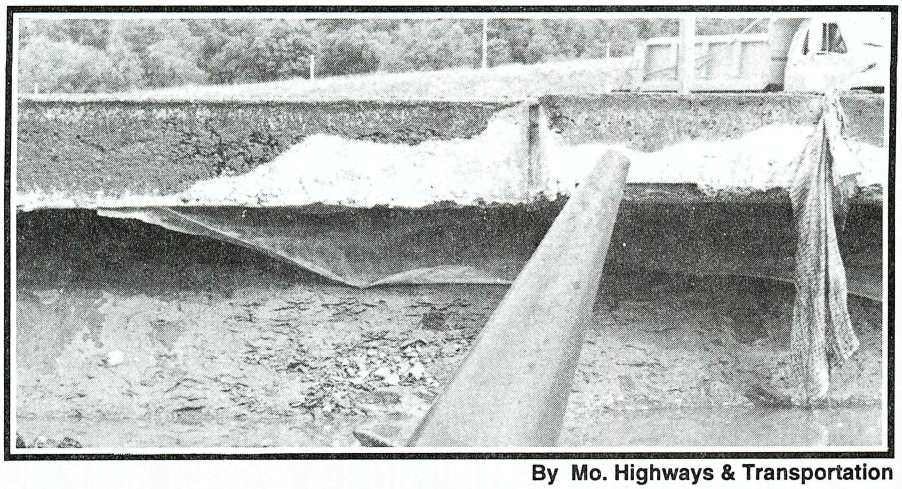
As of October 31, 1995, 2,988 applications were forwarded to the SBA for funding from individuals and small businesses using the tele-registration for individual assistance. The SBA mailed information to the individuals and small businesses receiving 1237 applications or 41% applications back. They processed 1187 applications. The SBA approved 460 loans totaling $5,959,700. Breaking that number down further, there were 401 Home and Personal Property Loans approved for $3,445,800; 37 Property and Equipment Loans approved for $1,782,400; and 22 Economic Injury Disaster Business Loans approved for $731,500. The SBA has nine applications pending loan approval.

As of October 26, 1995, FEMA received 3,554 applications for housing assistance. Of that number, there were 2627 eligible applicants or 73% of the total number. As of October 26, 1995, FEMA sent checks totaling $4,132,242 for disaster housing assistance; $91,060 for Crisis Counseling; and $639,500 for Disaster Unemployment Assistance.

As of October 24, 1995, the SEMA administered IFG program processed 1863 applicants (who were denied an SBA loan). The IFG program approved 852 applicants totaling $1,011,502. The IFG program denied over 900 applications for various reasons ranging from inspector's statements that there was no visible property damage at the time of inspection to homeowners had adequate insurance coverage. There are four IFG cases pending a decision. The average IFG grant was approximately $2,000.

Public Assistance

Section 402 of the Stafford Act authorizes the President to make contributions to State, local governments or certain private non profit organizations to help repair, restore, reconstruct or replace public facilities



By Mo. Highways & Transportation

which were damaged or destroyed by a major disaster. The Federal share is 75%, the State share is 15%, and the Local Share is 10% of the total obligated funds. Public Assistance funds become available for the following categories:

- Debris Removal
- Protective Measures
- Road Systems and Bridges
- Water Control Facilities
- Public Buildings and Equipment
- Public Utility Systems

By the close on the incident period on 1054, there were 42 Missouri counties with a Public Assistance Declaration.

As counties were declared, SEMA's Public Assistance branch conducted a series of public officials briefings. The meetings were two-fold. The officials were briefed about regulation, reporting and site damage changes and criteria, as well as, given a chance to submit their Notice of Interest to file projects for funding consideration. SEMA PA branch received NOIs from 329 applicants. The break down is as follows: 160 local governments, six State agencies, 149 special districts, and 14 private non-profit groups.

During the Preliminary Damage Assessments (PDAs) conducted by joint federal and state officials, FEMA projected there could be over 3200 different possible Public Assistance Projects. One of the biggest changes between the 1993 and 1995 flooding periods was the minimum dollar amount of damage per site. In 1993, the minimum amount of damages per site was $250 compared to a minimum amount of $1000 per site in 1995. Many of the projected damage sites did not reach the minimum amount criteria.

Another problem encountered by PDA teams was the fact the initial site visits were conducted with the area was still flooded. Teams and local public officials used the 1993 damage figures to come up with initial public damage estimates. In the 1993 flood, the river currents were swift and there was prolonged flooding over several months. Compared to the 1995 flood, the river flooding was slower to rise, not as swift or as long a duration. Hence the PDA teams actually wrote Damage Survey Reports (DSRs) for 2090 different damage sites statewide.

As of October 26, 1995, FEMA has reviewed 2063 DSRs. Likewise, as of October 6, 1995, the Public Assistance branch approved and obligated $9,497,812 Public Assistance funds for 1910 different sites. PDA teams continue to conduct re-inspections to gather additional or missing information for many sites that have not yet been approved for funding.

Recovery Partnership

The Governor's Flood Recovery Partnership became a reality after the Great Summer Flood of 1993. The Partnership is made up of representatives of church-affiliated organizations, not-for-profit disaster relief and charitable organizations, social policy advocacy groups, FEMA and several State agencies. The Partnership holds regular quarterly meetings and conference calls working closely with SEMA on disaster response and recovery issues.

The Response

Throughout the entire May-July flooding period, the Flood Recovery Partnership held regular conference calls. Partnership members became the eyes and ears for each other and SEMA on how the flooding impacted individuals, small businesses and communities throughout the State. Because of this, agencies were able to better coordinate the community disaster response i.e. mass care or feeding centers, unmet needs that were not being addressed by volunteer agencies or areas where there was too much agency response.

During the Flood of 1995 the Partnership:

- Monitored the I.A. application rate, tracking geographic areas the applications were coming from. The Partnership was actively involved in the PDA information and wanted to make sure the applications were coming from the targeted areas.

- Tried to access and predict the individual citizens' needs, future services and unmet needs. They also tried to determine if the 1995 flood would be a normal flood event or a long-term flood event like the Summer 1993 flood. The 1995 flood was a normal flood event.

- Requested the Missouri Attorney General's Office to republish the Emergency Price Gouging Information, Consumer Fraud Information and Consumer Hotline for private citizens.

- Got the Small Business Administration to rewrite their cover letter for SBA low-interest loans. In 1993, individuals thought the SBA loans were only for businesses. The cover letter outlined the FEMA Individual Assistance application

procedures and informed private citizens about SBA low-interest loans for home and personal property losses not covered by insurance.

· Worked through FEMA, SEMA, Voluntary Agency Public Information Officers and the news media trying to attract volunteers. After the 1993 and 1994 floods, volunteer apathy was very high in the 1995 floods.

· Encouraged and supported the Department of Mental Health's Grant application for crisis counseling funding. The DMH's grant extension was ultimately denied by FEMA.

The Recovery

· Trying to positively influence federal budget decisions regarding legal assistance for the poor. They are especially working to keep Eastern Missouri Legal Services in St. Louis and Western Missouri Legal Services in Kansas City funded.

· Continue to Work with local Unmet Needs Committees across the State.

· Housing issues for the poor are a great concern. The Partnership found that landlords rehabilitated 1993 flood damaged rental property in the floodplains (because it was not eligible for the buyout program) then rented the property to poorer families at higher rental rates. Additionally the landlords do not disclose the fact the rental property was rehabilitated. There have been numerous cases of illness from the molds, mildew and other health issues among poorer families renting in the floodplains. The Partnership is trying to approach landlords about lowering the higher rental rates and disclose the facts the property was flood damaged and rehabilitated.

Lessons Learned

One of the most important outcomes of the 1995 Flood was getting to know other volunteer agency and State agency counterparts. The volunteer groups were able to coordinate their disaster response to communities without duplicating services. There was a high trust level between the different organizations and the State agencies with human service responsibilities. The SEOC was available for volunteer emergency response teams to work closely with State agencies. SEMA provided the most current disaster response and recovery information available to the volunteer agencies so they could make better decisions for allocating their resources.

As the various volunteer agencies become more familiar with and continue to train for future disaster responses with SEMA and other State agencies, the citizens of Missouri will benefit in the next disaster.

By Mo. Highways & Transportation

Hazard Mitigation

Interagency Hazard Mitigation Team Report

Section 404 of the Stafford Act authorizes the President to contribute up to 50% of the cost of hazard mitigation measures which the President has determined are cost effective and which substantially reduce the risk of future damage, hardship, loss or suffering in any area affected by a major disaster.

The Stafford Act regulations establish the need for a Interagency Hazard Mitigation Team (IHMT) report to identify practical measures to reduce the vulnerability of communities to similar disaster in the future. The report must be completed 90 days after the close of the disaster.

The team reviewed their recommendations from the 1993 and 1994 flood events, as well as, the Governor's Task Force on Floodplain Management Recommendations of June 1994. Many of those 1993 and 1994 recommendations are currently being acted upon or have been set in place for future disasters.

Three major recommendations from this report were:

· The Missouri Community Buyout Program's success was evident in the 1995 flood event. The Buyout Program actively moved citizens out of harm's way in the floodplains and as a direct result applications for Individual Assistance were down dramatically. Missouri informed FEMA the program would continue if mitigation funding was available.

· Levee construction and permitting continues to be a problem. All non-

federal levees on the Missouri River failed. The COE levees held but emergency measures and rock cuts had to be authorized in several levees that were being repaired by the COE at the beginning of the flooding period. SEMA is in the process of identifying all non-federal levees. Agricultural levee identification and repair is another issue that must be addressed.

· There needs to be more and better communication and coordination between the federal and State agencies involved in mitigation issues. The left hand must know what the right hand is doing.

State Hazard Mitigation Plan

The Stafford Act requires state and local governments to prepare and implement hazard mitigation plans as a method for evaluating the natural disaster in the disaster area and to identify appropriate actions to reduce risks from these hazards. States must update the Plan (also known as the 409 Plan) within 180 days of the date of a disaster declaration.

Once the Plan is updated and reviewed by FEMA, the State becomes responsible for monitoring, evaluating and implementing the Plan and for submitting annual progress reports to FEMA. The State Hazard Mitigation Plan is the basis for identification of measures to be funded under the Hazard Mitigation Grant Program.

The State submitted an amended State Hazard Mitigation Plan to FEMA in July 1995. Many of the initiatives i.e. Mitigation Coordination, Buyouts, Flood Plain Management, Public Safety, Emergency Preparedness, Earthquake and Drought Issues were currently being acted upon.

The amended Plan addressed the Buyout Program issues.

Since Disaster 1054 was primarily flood related and the primary future flood mitigation efforts of Missouri should be the continuation of the Buyout Program. "By all evaluation measures, the Missouri Buyout Program begun in 1993 has proved to be the ultimate in flood hazard mitigation efforts."

Missouri applied all hazard mitigation grant funds from Disaster 1054 toward the continuation of the Buyout Program previously funded by Disasters 995 (Summer 1993 Flood), 1006 (November 1993 Flood), and 1023 (April 1994 Flood).

Hazard Mitigation Grant Program

Section 404 of the Stafford Act authorizes that after a Presidential declaration of major disaster requiring Public Assistance under Section 406, that grants are provided to communities. For the floods of 1993 and 1994, The Volkmer Bill changed funding for Hazard Mitigation to 15% of the total Individual Assistance and Public Assistance funds. The Volkmer Bill changed the Federal-State match to 75-25 percent. The Bill also stated that flooded communities must participate in the National Flood Insurance Program (NFIP) to be eligible for hazard mitigation grant assistance.

The 1993 Buyout Program focused on buying repeatedly substantially damaged primary homes from willing sellers living in the floodplain. Because of the success of the 1993 Missouri Buyout Program, the State Hazard Mitigation Grant Program focused on continuing the Missouri Buyout Program.

Based on set priorities, Missouri distributes the FEMA HMGP and matching Missouri GR funds. Governor Carnahan set the following priorities for the 1995 Buyout Program: the primary residences must be in the 100-year flood plain, the homes must be substantially damaged, and the project must be cost effective.

The State Hazard Mitigation Officer (SHMO) sent letters to over 300 Missouri communities to apply for the 1995 Buyout Program. The letters were sent after the close of the 1995 flooding period.

Prospective applicants were told there would be a 75-25 percent match. The 25 percent local match could be in-kind service, equipment, or materials. Project selection criteria would be based on guidance from the Code of Federal Regulations (CFR) 44. The HMGP funds could be used in combination with other federal, state or local programs, but could not duplicate or replace existing programs.

A total of 16 communities applied for the HMGP funding. Officials from SEMA and Community Development Block Grant Program (CDBG) visited each community to view the proposed buyout sites and determine how the buyout would impact future floodfighting efforts. Governor Carnahan sent a recommendation to FEMA to fund three communities. As funds from the 1993 Community Buyout Program closeouts become available, the money could be used to assist some of the communities not funded with 1995 money.

Missouri Community Buyout Program

Many Missouri River communities were flooded in 1993, 1994 and 1995. But the biggest difference between the 1993 and the 1995 Flood was the success of the Missouri Buyout Program.

The Buyout Program's goal was to move willing sellers out of the floodplains. The Missouri program's success was phenomenal. When the program was announced, many homeowners felt it would be years before they would be bought out. Additionally, Governor Carnahan conservatively estimated that the State would save $200

St. Charles County Mobile Home Park in 1993 flood, courtesy St. Louis Post Dispatch

St. Charles County 1995 Flood, site of 1993 Mobile Home Park Buyout Project. Courtesy St.Charles Co. Buyout Program.

million dollars in flood fight costs, Individual Assistance and Flood insurance claims over 20 years. No one expected to test the buyout theories with another 100+ year flood so soon.

1993 Buyout Program

The Volkmer Bill set the groundwork for the Buyout Program. $30 million was available to Missouri from the FEMA Hazard Mitigation Section 404 funds. Housing and Urban Development (HUD) Director Henry Cisneros made a commitment to give Missouri disaster relief funds for housing - $30 million in Community Development Block Grant (CDBG) funds. Governor Carnahan was so committed to helping people move out of the floodplains that he matched the Section 404 funds dollar for dollar with the CDBG Funds. Eventually FEMA allowed Public Safety Section 406 funds to be used for the demolition portion of the buyout.

Missouri's basic concept was simple. The local community identified the primary homes to be purchased, asked the owners if they were willing to sell, bought and demolished the house, and turned the land into open spaces, wetlands or recreational facilities.

There were 42 buyout communities funded which targeted a little over 4000 primary residences to be purchased. When the flooding hit along the Missouri and Mississippi Rivers in the spring and early summer of 1995, the Buyout Program had acquired over 3200 properties with many communities already in the demolition stages.

Buyout communities such as Jefferson City, Arnold, Lincoln and St. Charles Counties pointed out the fact that if the 1993 buyout had not taken place, the same houses would have been flooded again. Expenses for evacuations, emergency rescues, and sandbagging were non-existent. Arnold City Administrator Eric Knoll estimated the Buyout Program saved the city more than $10,000 for those related expenses. Jefferson City acting City Administrator Allen Garner estimated if the homeowners were still in the floodplain the flood insurance and disaster assistance paid to individuals would have totaled more than half of the cost of the Buyout Program.

By mid-October, SEMA estimated that more than 3700 properties had been purchased by the local communities. The acquisition portion of the 1993 buyouts will be completed by Dec. 31, 1995. The demolition portion of the 1993 Buyout Program will be completed by July 31, 1996.

1995 Buyout Communities

Based on the 15% formula of total Individual Assistance and Public Assistance funds in the 1995 flood event, FEMA said Missouri could expect $1.6 million for the Hazard Mitigation Grant Program. Governor Carnahan used $1 million in General Revenue funds for the State's share of the Mitigation Grant match. Because he felt so strongly about continuing to move citizen's out of harm's way in the floodplains, the Federal/State Match was 69-31% instead of the normal 75-25% match. The 1995 Buyout Program was funded with just $2.6 million.

Again the Governor's buyout priorities were straight forward - substantially damaged primary residential homes, in the 100-year floodplain, and the entire project would be cost effective.

SEMA sent letters to over 300 prospective communities with instructions on how to make an application for the 1995 Buyout Program. Sixteen communities sent in Buyout Program applications. SEMA and CDBG officials toured the 16 communities to view approximately 300 properties, and establish the cost effectiveness of each application.

Three communities meeting the Governor's criteria were: the City of Cape Girardeau, Commerce in Scott County and Portage Des Sioux in St. Charles County. As a bonus, funding those three communities targeted 125 homes or almost half of the primary residences targeted in all 16 applications.

The City of Cape Girardeau would receive $724,000 to purchase 49 primary residences. Commerce would receive $1,756,707 to purchase 74 primary residences. Portage Des Sioux would receive $77,000 to purchase five residences (which are contiguous to an ongoing CDBG buyout project).

1995 buyouts should be completed before the end of 1995 with the demolition work to be concluded in 1996.

Activity Log - Flooding/Severe Weather '95

May 8 - Widespread and heavy rains the previous 96 hours caused the Missouri and Mississippi Rivers to rise. At noon, the Kansas City Corps of Engineers (COE) contacted the SEMA Duty Officer and declared a flood emergency for the Missouri River. Five levee projects which had not been completely rehabilitated in the Kansas City COE area were being closely monitored. The five projects are: Glasgow-Saline Levee, Cambridge Levee, Lower Chariton Levee, MRLS-246, and Tri-County Levee. The Corps of Engineers approved a cut in the lower end of the Glasgow-Saline Levee to facilitate drainage from behind the levee which is adjacent to Hwy 240 and under 8 inches of water. Emergency work was authorized by the COE on the Lower Chariton Levee to raise the levee above the predicted flood crest of 30.5 feet.

May 9 - NWS issued river crests between 4-6 feet above flood stage along the Missouri River. St. Charles County issued a flood advisory/warning to residents in the Grafton, Melvin Price and other low lying areas along the Mississippi River could experience flooding.

May 10 - COE began issuing sandbags to Hartsburg, Lexington, Div. of Facilities Management in the Office of Administration. Approximately 2-4 inches of rain fell in Nebraska; NWS called for continuing long range rainfall combined with saturated soil indicated there would be lowland flooding along the Missouri River. Missouri State Highway Patrol Troops A & B reported road closing due to localized river and stream flooding.

May 11 - COE was monitoring the Cambridge Levee, seepage was reported on the Glasgow-Saline Levee; the COE was also monitoring 8 other levees for erosion and emergency repairs. COE released 5,000 sandbags to Hermann and 50,000 to St. Charles County.

May 12 - Ste. Genevieve closed the north end of Main Street, secured drainage culvert flaps and installed pumps for dewatering. The St. Louis COE had pre-positioned boats on both the Missouri and Mississippi Rivers. The COE authorized periodic over-flights of the Missouri River to assess levee conditions. MSHP reported road closings in Troops A, C and F areas due to localized stream and river flooding.

May 15 - New Haven requested pumps from the COE as a precautionary measure. Ste. Genevieve reported city streets impassable due to rising creeks from backwater and are using pumps to drain the area. Commerce (Scott County) reports flooded houses. Cape Girardeau County elevating low spots on county roads.

May 16 - Significant rain over the last 24 hours caused flash flooding in Kansas City, St. Louis and Central Missouri areas. A fracture in the Chariton Levee caused seepage. The COE is beginning emergency repairs. Lafayette County requested dewatering pumps. Highway 94 was closed because of water - causing modification to the EPZ evacuation route for the Callaway Nuclear Plant in Reform.

May 17 - Governor Carnahan called a State of Emergency for flooding. SEOC activated to Level 2 for 24 hour operations. State agencies put on standby basis. Cape Girardeau County requested dewatering pumps. NWS revised flood crest information on the Missouri and Mississippi Rivers to rise approximately 10 feet above flood stage in Glasgow, Boonville, Jefferson City, Hermann, St. Charles and Cape Girardeau. Bagnell Dam opened 4 floodgates releasing 50,000 cfs into the Osage River which is expected to rise by 4 feet.

The Department of Corrections sent 20 inmates to assist in sandbagging efforts at the Jefferson City Airport. The flood water covered the runway. In St. Charles County, traffic on I-70 was briefly stopped because of standing rain water on the road. Evacuations and shelters were ordered in St. Charles County. In Boone County, officials reported water supply problems - the current exposed a water line and flooding by the main power pole to the pumps; two generators requested for backup power. Evacuations were also conducted in Brookfield and apartment complexes in Hazelwood and Maryland Heights. St. Louis Metro Sewer District reporting problems. A tornado caused 1 fatality in Nevada. Severe weather and localized flooding reported in numerous counties. Levee problems reported at Wooldridge, Myric in Lafayette County, levees in Cooper County, Brunswick, Carroll County, and Ray County #2 district in danger of overtopping. Lower Chariton Levee in danger of breaching. The Great Western RR allowed a cut to their levee to relieve pressure and flooding on Highway 240 to Glasgow.

Major roads closed include: Highways 100 at Chamois, 94 at Tebbetts, 240 at Glasgow, Route O at Auxvasse, Route 10 in Carroll County, Route 24 in Brunswick, Route 179 at Sandy Hook, Route 23 near Concordia, Route B east of Platte City, Route UU from Marshall to Sweet Springs.

SEMA sent field damage teams to Nevada, Carroll County, Southeast Missouri, Northeast Missouri, Kansas City and St. Louis areas.

May 18 - Widespread rain continues across Missouri. Close to 50 counties are reporting flooding and storm damages. State agency resources have been activated to assist local communities. There have been two confirmed fatalities: one man died when his car was swept off a road during flash flooding and a second man died in a car accident attributed to water on the road. Between 2-5 inches of rain fell over the state. Tornados touched down in Hillsboro with injuries, Crystal City, north St. Louis County area, Marston, Chaffee and Randles on the Cape/Scott County lines.

- **Missouri National Guard** - providing security assistance in Nevada and is providing technical levee assistance in Ste. Genevieve. Security and debris removal missions in Nevada and lighting assistance to Kimmswick.

- **Missouri Highways & Transportation** - implemented sand hauling and road closures. Implemented preventative measures at the 63/54 interchange north of Jefferson City at the Missouri River. Highways

19 at Hermann, 94 in Callaway County, and 47 in Washington were closed due to flooding. Begins constructing barriers at the 63/54 interchange north of Jefferson City. The Missouri River is expected to crest at 34 feet (flood stage at Jefferson City is 23 feet).

- **Missouri Department of Natural Resources** - began monitoring water systems and provided a boat to the Jefferson City sewer district. DNR is responding to Haz Mat reports of propane tanks floating in floodplains, sewer problems in Jefferson City and monitoring threatened water supply systems.

- **Missouri Department of Corrections** - providing inmates for sandbagging and community support. Inmates assist with sandbagging requests in various counties.

- **U. S. Coast Guard in St. Louis** - closed the Missouri River to navigation. Provided emergency assistance to local communities.

- **Corps of Engineers** - provided sandbags and pumps as requested. Conducting emergency levee repairs, providing technical support to levee districts and monitored river conditions and crests.

- **Missouri Department of Mental Health** - has crisis counseling on standby if local communities request assistance.

- **American Red Cross** - Opened shelters in St. Clair, Rhineland, Nevada, Steelville, St. Louis, Kansas City, Steeleville, Commerce, Chaffee, Marshal and St. Clair.

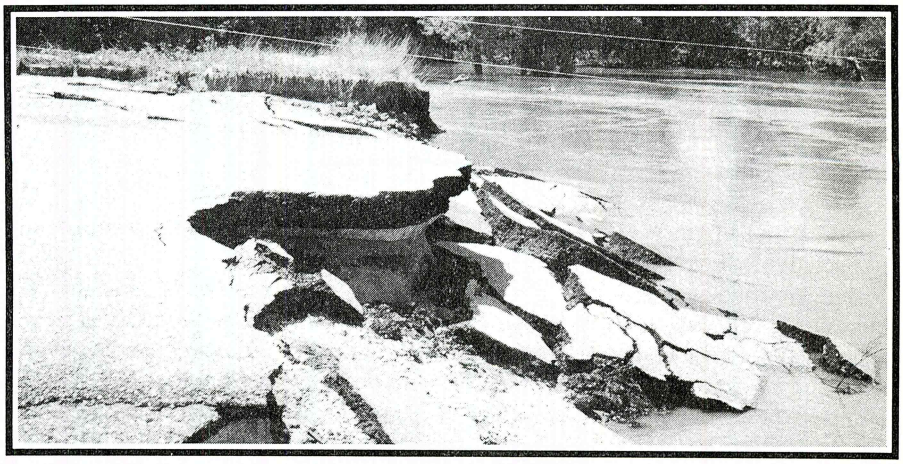
- **Missouri Disaster Recovery Partnership** - assisting with unmet needs of Missourians affected by flooding and severe weather conditions.

- **Division of Fire Safety** has activated the Fire Marshal Aide for equipment and personnel support in Carrollton.

- **Department of Health** is assisting in monitoring water supply systems and related health issues.

- **Missouri Dept. of Labor and Industrial Relations** - set up an 800 number for wage information and conducting on-site electrical and structural safety inspections for businesses affected by the flooding.

- **May 19** - Overnight,



By Mo. Highways & Transportation

residents in Portage Des Sioux were evacuated along the Mississippi River; North Levee in St. Charles is in danger of overtopping which could result in the evacuation of 5,000 citizens. Fifteen families were evacuated when the Miles Point Levee overtopped in Carroll County. Kimmswick sandbagging levee operations are in danger of being overtopped. Brunswick and Bean Lake citizens evacuated levees in danger of overtopping. St. Louis County monitoring possible levee overtopping in "Valley" area. The Wooldridge/Overton levee was breached in Cooper County. COE is constructing a temporary levee in Dutchtown to protect the town.

- The Kansas City COE flew aerial recon flights over the Missouri River of all the levees from the Iowa border to Washington.

- MHTD closed Highway 47 at Washington and 13 at Lexington. Numerous roads are closed throughout the state. In Jefferson City, the Missouri River is within 12 inches of overtopping the barriers erected at the 63/54 exchange north of Jefferson City.

- Mo. National Guard - sent liaison officers to Carrollton and St. Charles Counties.

- Mo. Water Patrol - assisting communities from Jefferson City to St. Louis on the Missouri River and from Ste. Genevieve to Cape Girardeau on the Mississippi River with evacuations.

- State Fire Marshal - activated Marine Task Force for Region C only.

- Mo. Dept of Correction inmates are sandbagging in Kimmswick, Hartsburg, Carrollton, Wooldridge, Boonville, Ste. Genevieve and St. Charles County.

- **Department of Economic Development - Div. of Transportation -Railroad Safety** -reporting water over Burlington Northern Lines by Alexandria. Water has breached railroad tracks for Norfolk Western at Hardin, 7 breeches along Cuivre River, Union Pacific lines breached from Blackwater to New Haven, Kansas City Southern reporting problems on Little Osage and Marmaton Rivers.

- American Red Cross and Salvation Army have sheltering and feeding centers in St. Charles County, Wayland, Valley Park, Jefferson County, Columbia, Jefferson City and Ste. Genevieve County.

- **May 20** - Gov. Carnahan, SEMA Director Jerry Uhlmann and Adjutant General Pendergrass fly over flooded areas and visit officials in Ste. Genevieve, Festus/Crystal City and St. Charles County. The Governor has "pledged to do everything we can to obtain federal assistance for the citizens and communities hurt by the recent flooding and tornadoes."

Federal-State Joint Preliminary Damage Assessment (PDA) Teams are in St. Charles , St. Louis, Jefferson, Gasconade and Lincoln Counties - results of surveys will be used to support any request for federal assistance. The Missouri River is expected to crest sometime today or tomorrow in Glasgow, Boonville, Jefferson City, Hermann, and St. Charles. The Kimmswick levee has been sandbagged to 46 feet, the Ste. Genevieve levees have been raised two feet, and two feet of rock has been poured on the Chesterfield Monarch

Levee. The North Alton Levee on the Missouri River was breached, the North County Levee is reported as stable but is being overtopped in several locations.

Forty-six of 114 counties plus the cities of St. Louis and Kansas City are reporting flooding and storm damages.

The Kansas City COE reports **along the Missouri River, all non-federal levees (except for Cole Junction in Cole County) from 1-70 in Cooper County to St. Charles County have been overtopped. All Federal levees are holding, watching the New Haven levee in Franklin County. A large number of levees from Kansas City to Cooper County have been overtopped or failed**

FEMA Region VII in Kansas City opened Regional Operations Center to monitor flooding in Missouri.

- DNR has adjusted state debris disposal and solid waste regulations in Jefferson County for tornado damages.

- Highway Patrol, DNR and US Coast Guard are investigating a possible petroleum pipeline break in the Weldon Springs area (St. Charles County).

- National Guard is preparing for emergency duty missions in St. Charles County, Festus/Crystal City areas.

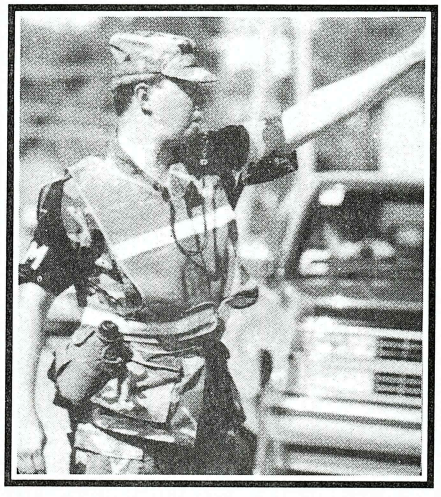
- Correction inmates are sandbagging and assisting in debris removal in Festus/Crystal City area.

- Mental Health crisis counselors are counseling residents in Cape Girardeau, St. Charles, Ste. Genevieve, Jefferson County, Rhineland, Gasconade and Central Missouri communities.

- DED - RR Safety reports Burlington Northern Lines impacted in Missouri between the Iowa and Arkansas borders. Union Pacific lines between Jefferson City and St. Louis have been raised and should be reopened. Norfolk Western has breached lines between Hardin and Norborne.

- Salvation Army and American Red Cross are continuing sheltering and feeding operations in central, eastern and southeastern Missouri.

- **May 21** - the Missouri River crested in St. Charles today. The Missouri and Mississippi Rivers are expected to crest in the St. Louis area tonight. In Commerce (Scott County) 16 homes have been flooded. The St. Louis District Coast Guard closed navigation on the Mississippi River in the vicinity of Commerce. Levees in New Madrid County are being watched for overtopping. However with slowly dropping rivers, levees that have not been overtopped or breached are expected to remain in good shape. State and local officials determined there was no petroleum pipeline break in the Weldon Springs area however, water samples are continuing to be collected. DNR will be conducting a river bank survey once the water



By Mo. National Guard

recedes to look for possible abandoned underground tanks.

- **May 22** - The Missouri River is dropping across the State. Portage Des Sioux remains cut off by floodwater from two rivers. Kimmswick levee has been raised to 46 feet. Sandbagging continues in Festus/Crystal City, Herculaneum and Ste. Genevieve. Inmates continue to sandbag an agricultural levee near Ste. Genevieve which if breached would flood the city and St. Mary. Cape Girardeau closed their flood gates. An agricultural levee near Commerce was breached. A storm front moving through Kansas, Iowa and Nebraska is expected to bring 3 inches of rain into western Missouri and about 5 inches of rain in Kansas City - this could impact the Missouri River.

Bagnell Dam has slowed their discharge to 25,000 cfs into the Osage River - the Lake pool has been lowered to 657 feet, which is below the normal pool level of 660 feet.

- DED RR Safety - Union Pacific RR reporting a 200 yard landslide in the Hermann area has closed one of two open lines.

- Fire Safety has activated Fire Mutual Aid for Southeast Missouri to supply pumps.

- DNR is working on issuing waivers for sold waste, hazardous materials and air quality. They are continuing to monitor municipal water systems.

- **May 23** - There has been a third fatality- a drowning while attempting to swim across a river. The Missouri River continues to slowly drop, however there is standing water from Glasgow to St. Charles. On the Mississippi River, levels are continuing to drop from Chester to Cape Girardeau.

- COE has distributed over 1.7 million sandbags for floodfighting.

- The American Red Cross is publishing an 800 number to assist flood-affected residents. THERE IS NOT FEDERAL HELP AVAILABLE AT THIS TIME.

- Joint Federal-State PDA teams were conducting surveys in Boone, Callaway, Cole, Ste. Genevieve, St. Charles and Jefferson Counties.

- Mo. National Guard - begin a rafting operation for Portage Des Sioux in St. Charles County

- DED- RR Safety - AMTRAK service westbound from St. Louis to Kansas City resumed when one of two main lines was raised two miles west of new Haven.

- **May 25** - Overnight rainfall of 2 inches has NWS predicting second river crests on both Missouri and Mississippi Rivers.

- Mo. National Guard has 130 soldiers on duty working in St. Charles County, Crystal City, Festus, West Alton, Sulphur Springs, Ste. Genevieve, Commerce and at the Luske-Chapel Levee in Scott County.

- DED-RR Safety - reporting the Burlington Northern line is still closed between Louisiana and St.Louis. There was a Union Pacific derailment at the Atchison Kansas bridge which will close the tracks for 2-3 weeks. Grand River flooding has closed the

SOO Line south of Chillicothe.

- MHTD - numerous roads remain closed throughout the state. Route 19 north of Hermann has a 300 foot long x 35 foot deep breach which is being filled with large rock. Projecting some traffic will be allowed on 19 next week, Rt 47 remains closed until Friday, Rt 13 north of Lexington has one lane open.

- Fire Marshal has activated Fire Mutual Aid for Region C, I and G. They have been notified of the status of Region E (Southeast Missouri) supplying pumps for levees.

- DNR reports a collapsed sewer line under the New Haven levee in Jefferson County will be repaired after the Missouri River returns within its flood banks. HAZMAT incidents are being investigated as they are reported.

- Corrections reports 804 inmates have assisted with sandbagging operations along the Missouri and Mississippi Rivers.

- **May 26** - More overnight rain has NWS predicting second river crests for Missouri and Mississippi Rivers. Fifty-eightsouri counties plus the cities of St. Louis and Kansas City reported recent flooding and storm damage.

- **May 27** - Overnight rain is expected to continue throughout the day with 2-3" of precipitation. COE reports the levees are holding steady. Sandbagging operations continue in St. Charles County, Winfield in Lincoln County, Pemiscot County, and there is lowland flooding in Mississippi County. PDA surveys are continuing.

Governor Mel Carnahan has requested a Presidential Declaration for Flooding for both Individual Assistance and Public Assistance for affected counties. However citizens are urged to continue contacting the Red Cross and Salvation Army for assistance if and until a federal declaration is made. The Red Cross is sheltering 100 families in the Cape Girardeau area. The Salvation Army is organizing Community Restoration Teams to help with cleanup efforts.

- Mo National Guard has 133 soldiers on duty in a variety of communities and assignments.

- DED RR Safety - Burlington Northern is closed between Louisiana to St. Louis.

- MHTD - Hwy 65 Bridge at Waverly (Carroll County), Rte 13 north of Lexington, Rte 24 in Waverly, Rte 240 in St. Louis County and intersection of Rts 40/87 & 5 are closed. The department hopes to reopen Hwy 19 in Hermann and Rt 47 in Washington to one-lane traffic.

- Mo Water Patrol is working evacuations in St. Charles, Lincoln, Cape Girardeau Counties and assisting local authorities in Ste. Genevieve and Jefferson City.

- Fire Safety contacted Region B and C about possible assistance for flooding in their regions.

- DNR reported a water main failure in Marion County effected 20 connections and issued a boil order.

- Corrections to date over 900 inmates have participated in sandbagging operations on both the Missouri and Mississippi Rivers.

- **May 27** - Rains continue, the NWS is predicting a third round of crests on both the Missouri and Mississippi Rivers later in the week. A slow moving storm front is expected to bring up to 5 inches of rain into Nebraska, Kansas and Western Missouri. A storm cell is also moving through Southeast Missouri.

Officials in Allendale (Cape Girardeau County) are preparing for evacuations. Work is underway in Scott County to raise the Commerce-Birds Point levee another foot. Higher Mississippi River crests many cause 200 New Madrid families to evacuate.

- **May 28** - No reports of widespread damage were received as a result of seven possible tornado reports across Missouri last night.

- Corrections reports that 1000 inmates and 250 staff were involved in sandbagging assistance through the end of their mission on the 27th. They will remain on standby for future assistance.

- Mo National Guard - is hauling rock for levee reinforcements in St. Genevieve, continues rafting operations in Portage Des Souix, and security missions in St. Louis and Jefferson Counties.

- **May 29** - Greene County emergency management reports estimated damages between $200-250,000 from a tornado. A 3.8 Richter scale earthquake was reported near Caruthersville.

- **May 30** - NWS expected Missouri River to crest at 33.4 feet in St. Charles on Wednesday. Flooding on the Illinois River will not significantly elevate crests but will slow the drop of Mississippi River stages.

- Mo National Guard - Ste. Genevieve levee mission ends today.

- Health - Vector control is ongoing throughout October and no mosquito problems have been documented.

- DNR has identified three locations to store hazardous materials retrieved from the rivers.

- DED RR Safety - reports Burlington Northern lines between St. Louis to Memphis are closed until mid-June.

- **May 31** - Scott, Mississippi and New Madrid Counties continue to be affected by high river stages and farmland flooding. Red Cross has two shelters open (Winfield and Cape Girardeau); Salvation Army has three feeding centers open.

- MHTD reports Rt 19 at Hermann is open. Rt 240 (Glasgow) will remain closed for two weeks. Rte 13 (Lexington), 24/65 (Waverly), 5/40/87 (New Franklin) and 47 (Washington) all have between 2-4 feet of water over the road.s

- Fire Safety Mutual Aid impacted counties will now focus on helping individual citizens pump water out of their basements.

- **June 1** - NWS Forecast indicates some areas will not be below flood stage until June 18.

- **June 2** - President Clinton declares disaster assistance for public infrastructure for 12 counties: Benton, Boone, Cole, Franklin, Gasconade, Jefferson, Johnson, Miller, St. Clair, St. Charles, Ste. Genevieve and St. Louis Counties.

- Mo National Guard has 83 soldiers on duty conducting rafting in St. Charles County and security missions in St. Louis and Jefferson Counties

- DNR has initiated an orphan container program. - the Emergency Response unit is responding to calls.

- Agriculture - has begun gathering information on damages to farmland.

- **June 5** - The Mississippi

River continues to slowly drop -- flooding on the Illinois and Ohio Rivers is not expected to significantly impact the Mississippi River. Continued areas of concern in southern Missouri include Scott, Mississippi and New Madrid Counties.

Individual Assistance for individuals and small businesses is not yet available....individuals may call either the American Red Cross or Salvation Army 800 telephone numbers.

Public officials from the declared counties have been invited to attend meetings so the Public Assistance program can be explained and they can submit Notice of Interests to SEMA PA staff for reviewing by FEMA.

A Federal-State meeting was held in St. Louis to allow state agencies a chance to liaison with their federal counterparts following the declaration for Public Assistance. FEMA-SEMA opened a Disaster Field Office (DFO) to administer assistance programs and a joint public information center for media assistance.

- **June 8** - The COE has assured Missouri that upriver reservoirs which are proposing to release snow melt water releases into the Missouri River will be controlled and will not significantly impact the Missouri or Mississippi Rivers.

- Joint FEMA - SEMA PDA teams have identified approximately 3200 individuals and families in several Missouri counties that have been affected by the severe weather, high winds, tornadoes and flooding.

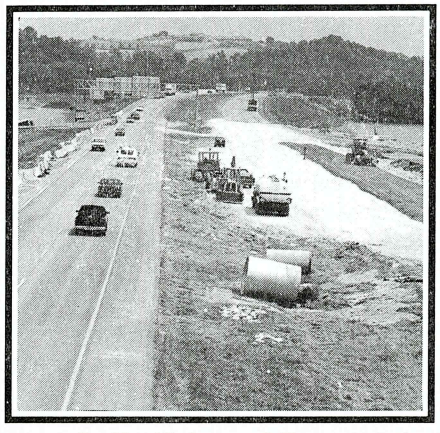
-Guard continues rafting operations in the Portage Des Sioux area of St. Charles County. Security missions ended today.

- **June 12** - President Clinton amended the Missouri Flooding Declaration to include Individual Assistance to 24 counties and the city of St. Louis. The 24 counties are: Benton, Boone, Callaway, Cape Girardeau, Carroll, Clark, Cole, Franklin, Gasconade, Jefferson, Johnson, Lincoln, Miller, Mississippi, Montgomery, Osage, Ray, Scotland, Scott, St. Charles, St. Clair, Ste. Genevievee, St. Louis and Vernon Counties.

Governor Carnahan requested an Agricultural Disaster Declaration from the U. S. Dept of Agriculture for 57,000 Missouri farmers unable to plant crops with over 730,000 acres of land affected by the severe weather and flooding.

- Employment Security established an 800 telephone number for inquiries. For the first time farmers (who are considered self-employed) become eligible for unemployment disaster benefits because of federal Individual Assistance Declaration. Likewise self-employed small business owners are also eligible for federal unemployment disaster benefits.

- MHTD - Rt 13 in Lexington



By Mo. Highways & Transportation

under 2 feet water; Rte 24/65 in Waverly is 5 ft under water and should reopen mid-July; Rt 240 in Glasgow is 6 inches under water with road damage should reopen in 30 days, Rt 87/40/5 in New Franklin is open, Rt 19 at Rhineland has 2 inches of water but is open, Rt 47 in Washington has 3 inches of water but is open.

- Individuals and small businesses applying for assistance must call the FEMA Tele-registration 800 number and have appropriate information when making the initial call.

- **June 14** - A Federal-State meeting was held in St. Charles County giving state agencies a chance to liaison with their federal counterparts after the announcement of the Individual Assistance Declaration.

- **June 15** - NWS indicates the Missouri River from Jefferson City east to the Mississippi River is not expected to return to river banks until early July. Survey teams are continuing to conduct PDAs in various counties.

- MHTD - opened Rt 13 at Lexington.

- Mo National Guard - there are 25 soldiers on duty. The rafting operations for Portage Des Sioux ended this evening.

- **June 19** - 1240 Missourians have registered with FEMA tele-registration for Individual Assistance of that number over 900 sought information about disaster housing.

- **June 20** - Seven counties have been added to the Presidential Declaration for Individual Assistance. They are: Adair, Barry, Cooper, Jackson, Lewis, Newton and Pemiscot Counties. 7 Counties which were previously declared for IA have also been declared for PA. These counties are: Callaway, Cape Girardeau, Carroll, Mississippi, Montgomery, Ray and Vernon Counties. Fifteen counties have been declared for IA & PA. These counties are: Andrew, Atchison, Bates, Chariton, Daviess, DeKalb, Gentry, Henry, Howard, Lafayette, Linn, Macon, Moniteau, Perry and Warren Counties.

- **June 21** - A Disaster Recovery Assistance Center (DRAC) was opened in St. Louis. Individuals and businesses needing assistance must still call the FEMA tele-registration 800 number to register. However, the DRAC will have federal, state and volunteer agency staff available to answer individual questions about programs or track their application status.

- **June 23** - The Disaster Incident Period is officially closed. Any individual or small business sustaining damages between May 13 through June 23 is still eligible for disaster assistance. DFO operations, PDA surveys, tele-registration operations remain open. Six counties have been added to the Individual Assistance Declaration. They are: Camden, Jasper, Maries, Morgan, McDonald and New Madrid.

- **June 26** - 734 disaster housing checks for $872,640 have been issued to date.

- **July 1** - Deadline for original 12 Missouri counties declared for Public Assistance to submit their notice of interest for projects.

- **July 4** - Overnight rains dropped 6 inches in Albany, 4-6 inches in Gentry County affecting Gentryville

and Darlington. Because of the large amounts of rain there was flash flooding on the Grand River causing 40 families to be evacuated.

A tornado hit Moberly at approximately 7:30 p.m. Thirteen people were treated and released from the hospital. Two people stayed overnight for observation. The courthouse, 25 businesses and approximately 300 families were effected by the tornado. Intersection of Hwy 63 and 24 was closed because of power lines on the road and Hwy 24 was closed east of Moberly because of a propane leak.

- **July 6** - Governor Carnahan issues a State of Emergency for Moberly and Randolph County. This action frees up state agency resources to assist local recovery efforts. Because the tornado happened 10 days after the official close of the disaster incident period, FEMA will not reopen the incident period.

- Mo State Highway Patrol provided 18 hour security shifts for several days.

- MHTD - cleared electric lines and debris from state highways

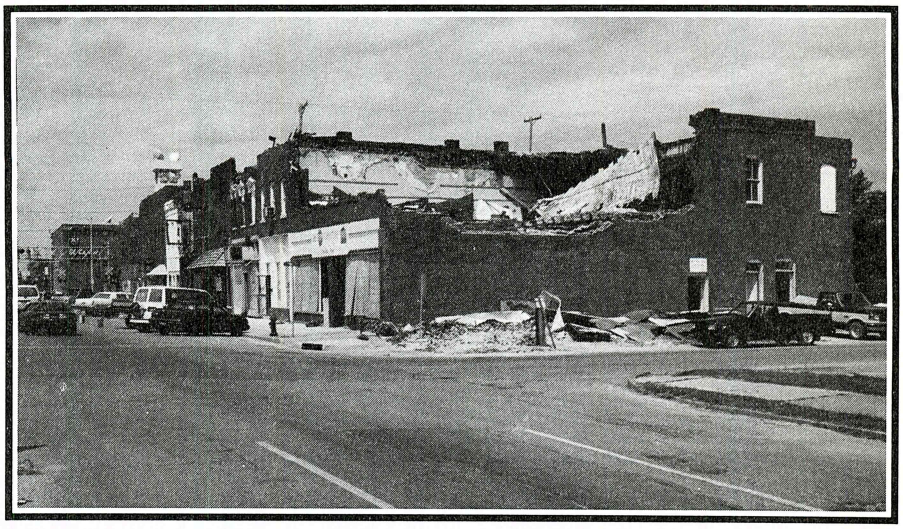
- Mo National Guard was activated by the Governor - and will assist the city with heavy debris removal operations

- DNR - issued open burning permit for storm debris, waived state tonnage fees for waste, waived prohibition of yard waste in landfills, DNR is working with cleanup crews to provide technical assistance for disposal of damaged transite-siding containing asbestos.

- Economic Development - recently opened offices to assist unemployment training and other related employment problems. Summer Youth Program will assist with clean up.

There have been 12 heat related deaths in Missouri with the Department of Health issuing a Heat Alert today. The Dept of Social Services, Div of Family Services has activate the low-income Home Energy Assistance Program which loans fans to low-income families. The Div. of Aging has activated an 800 number for senior cooling centers.

FEMA sent a mobile DRAC to Cape Girardeau to provide assistance to more citizens. This Mobile DRAC will visit 9 communities between July 6-July 18.



Moberly Tornado Damage, courtesy Mo. National Guard

- **July 7** - The U.S. Dept of Agriculture announced a President Declaration for farmers in 107 Missouri counties suffering from losses from the severe spring weather and flooding.

FEMA reports it has approved $909,373 to 736 eligible applicants out of 1111 applications for Disaster Housing Assistance in St. Louis County. They paid $248,396 in housing assistance to 224 eligible applicants out of 344 applications in St. Louis City.

- **July 13** - Six counties have been added to the Individual Assistance Declaration. They are: Barton, Cass, Dallas, Clark, McDonald, and St. Francois. Four counties have been added to the Individual Assistance and Public Assistance Declaration. They are Nodaway, Saline, Stone and Sullivan.

- **July 14** - The Small Business Administration announced there was a SBA Declaration for Randolph County and the contiguous counties of Audrain, Boone, Chariton, Howard, Macon, Monroe and Shelby resulting from the July 4 Tornado in Moberly and Randolph County. This Declaration provides low interest loans to business and homeowners in Randolph County and an economic injury low interest loan to the contiguous counties.

- MHTD - The last two highways closed by the 1995 flooding are reopened. They are Rt 13 in Lexington and Rt 24/65 in Waverly.

- **July 17** - The Missouri River falls below flood stage for the first time since May 8, 1995.

- **July 18** - The Kansas City COE closes the Missouri River flooding period. The Kansas City COE issued 753,320 sandbags and 37 pumps to communities since May 8. Today is the last day of operations for the DRACs (fixed in St. Louis and mobile).

- **July 25** - The last 2 counties to be added to the Public Assistance Declaration are Cooper and Mercer. Mercer was also added to the Individual Assistance Declaration.

- **July 26** - SBA announces an Economic Injury Disaster Loan Declaration for Missouri and the adjacent states of Arkansas, Iowa, Kansas, Nebraska and Oklahoma.

- **July 28** - the last day of operations for the Disaster Field Office in St. Louis.

- **August 11** - the last day for individuals or small businesses suffering damages from the flooding and severe weather between May 13 - June 23, 1995 to register with the FEMA tele-registration.

Local Governments Response and Recovery

After days of rain, severe spring weather, flash floods and flooding on the Missouri and Mississippi Rivers, local emergency management directors began asking for assistance from the State Emergency Management Agency (SEMA). The State Emergency Operations Center was activated on May 17 to begin handling the increased telephone calls from local governments asking for assistance. In the afternoon of May 17, Governor Mel Carnahan issued a State of Emergency Declaration thus freeing state agency resources to assist local authorities with their floodfighting response. Additionally the Kansas City District of the Corps of Engineers sent a representative to the SEOC to provide technical assistance to local governments with levee problems.

The first Presidential Declaration was June 2 for 12 Missouri counties for Public Assistance. The twelve counties were: Benton, Boone, Cole, Franklin, Gasconade, Jefferson, Johnson, Miller, St. Charles, St. Clair, Ste. Genevieve and St. Louis. Before the 1995 flooding disaster known as FEMA 1054 was completed, 61 Missouri counties received a declaration for either Public Assistance and/or Individual Assistance.

Several counties submitted an afteraction report to SEMA about damages they sustained in the 1995 flooding (1054).

Callaway County

The Callaway County Commission contacted SEMA Public Assistance Branch on June 9 and 12 with an original damage estimate of $143,000 to public facilities. By the time Callaway County was included on the June 20 amended declaration for Public Assistance, county damage estimates rose to include 18 sites with a total of $201,753 in damages to public property. The actual expenses involved in the initial floodfighting response rose to $101,208.26.

Callaway County Presiding Commissioner Lee Fritz stated "... both SEMA and FEMA inspectors were helpful in their inspections of the damage. With the computerization of road and bridge data and coordination with SEMA and FEMA inspectors, efforts were much improved since 1993."

Cape Girardeau County

The Flood of 1995 officially began May 3, when the Mississippi River went over the flood stage of 32 feet on the Cape Girardeau gauge. The actual flood officially ended Sunday, June 25, when the river dropped below 32 feet.

The initial response to the Flood of '95 was to go into a warning mode. As soon as it was learned that a Mississippi River flood was predicted, all authorities and businesses that would be affected were notified. Follow-up was maintained by faxing weather and river stage information from the National Weather Service to those who did not have the resources to obtain the information directly. The Missouri National Guard was contacted as well as the State Emergency Management Agency. Meetings were held with representatives from Cape Girardeau County, Cape Girardeau City, Dutchtown and Allenville to decide on the course of action.

The most significant difference between the Flood of '93 and the Flood of '95 was the reaction of the citizens. Whether the lack of response was due to burn-out from the 1993 flood or a disbelief that this could be happening again or the speed of the rise is probably a moot question. The fact remains that the citizen reaction was entirely different as there was an incredible amount of apathy and very little volunteerism.

Approximately 265 people were evacuated from their homes in Cape Girardeau County (including the city of Cape Girardeau). Seventy people were sheltered by private relief agencies. The remaining 195 went to family or friends or made their own arrangements. There were no deaths attributed to the Flood of '95 in the County.

The unique position of Cape Girardeau County on the border between the St. Louis and Memphis Districts of both the U.S. Coast Guard and the U.S. Army Corps of Engineers (COE) presented some interesting situations which were resolved with little or no difficulty. In both cases, the COE and Coast Guard, the Memphis District provided the bulk of the personnel and expense. The Coast Guard had 73 people on active duty in the county during the flooding. The COE had 32 people and spent $33,800 on levee building and maintenance during the flood. The COE along with the County Highway Department and the County Special Road District erected a temporary levee 6 feet high and 2900 feet long to protect the unincorporated town of Dutchtown. This levee was designed and engineered by the COE Memphis District who also provide the materials The work of erecting and removing the levee was done by the County Highway Dept. and Special Road District.

Contact was make and communication was maintained with the Missouri National Guard. They were kept informed of the Cape Girardeau County reponse and situation. They were not used in '95 as they had been in '93 in part because we were better prepared for a flood response, in part because of a more hands on Federal response and in part because of the mitigation and recovery efforts done after the Flood of '93.

There were 24,000 acres of agricultural land flooded in the Cape Girardeau County of which approximately 1/3 were not planted. The financial burden to Cape Girardeau County, Cape Girardeau City, Main Street Levee District, SEMO Regional Port Authority, and Special Road District totaled $729,781. This did not include any Federal monies spent by the U.S. Coast Guard or U. S. COE.

Dutchtown in Cape Girardeau County

The County Response: The Office of Emergency Management served as advisor to the County Commissioners and with the help of volunteer radio operators expanded the department's hours to an 18-hour day. Presiding Commissioner Gerald Jones supervised all county operations; Commissioner Larry Bock was in the field supervising road and bridge issues; Commissioner Joe Gambill was the liaison with Cape Girardeau City; Auditor Weldon Macke kept detailed financial records; the Sheriff's Department enforced the curfew, patrolled flooded areas, kept detailed records of road closings, evacuations and mapped the towns of Dutchtown and Allenville showing how many people lived in each residence and who had medical problems. Other County Departments responding included the County Highway Department, the Cape Special Road District, the County Health Department, County Assessor for property damage estimates, data processing, the American Red Cross, Salvation Army and the rural fire departments of Delta, Whitewater, Fruitland and East County.

The Recovery: Cape Girardeau County and City have both decided that to "put it back the way it was" isn't good enough. Both have voted to participate in a Federal Buyout Program which will keep future flood damage to a minimum. It will also prevent the need for evacuation, sheltering and temporary levees and the expenses incurred. Other recovery and repair efforts include raising some roads and voluntary relocation. Data is being developed and records being made that will facilitate response and mitigation efforts in the event of another flood. Other recovery work being done by County officials include meetings with State and Federal inspectors regarding Individual Assistance and Public Assistance program compliance.

DeKalb County

Damages in DeKalb County included the following: 16 sites damaged including three bridges which needed drift removal, four box culverts needed to be reopened.

The main lesson learned: Keep better records as each disaster site was located and document the damages with photographs. Additionally, bookkeeping and paperwork must be done as the work progresses instead of after all the work was completed.

There was no way many of the damages could have been prevented. However changing the minimum damage at each site from $250 (in '93) to $1000 (in '95) eliminated numerous sites from being eligible for disaster funds.

Hermann & Gasconade County

Gasconade County and the city of Hermann suffered less damage from the Flood of '95 than in the previous flood of '93.

The unincorporated area of Gasconade County damage was mainly roads and bridges. Damage to the same roads and bridges was approximately $109,000 in '93 as compared to $21,000 in '95. The main reason for less damage was the lack of flash flooding and the shorter period that the roads were under water. The City of Hermann suffered approximately $815,000 damages in '93 vs approximately $50,000 in '95. The main reason for the reduced loss was again the lack of flash flooding, the buyout program and the shorter period of flash flood conditions.

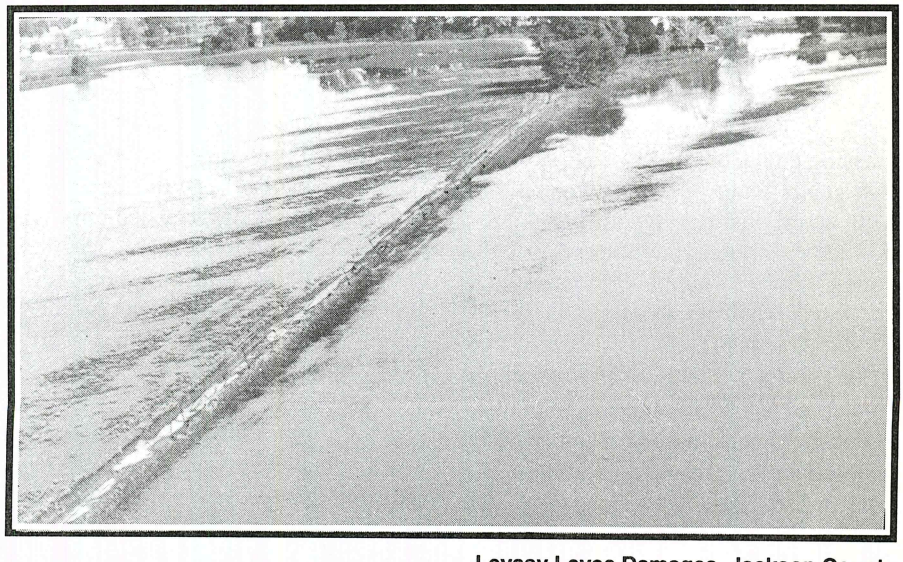
Agricultural damage, due primarily to the inability to plant crops due to the flooding, affected approximately 3500 acres of corn, 1500 acres of soybeans and 150 acres of milo.

Jackson County

Jackson County received a Presidential Declaration for Individual Assistance but not Public Assistance.

Jackson County reported $52,000 in damage to roads and bridges; and $39,000 in damages to county parks. Most of the park damage was for rip-rap rock replacement, debris removal and some road repairs.

The City of Levasy, experienced some flooding from the Missouri River backwater, on the east side of town. At their request, the County Legislature and County Executive passed an ordinance in the amount of $26,000 which will pay for a new levee. This new levee will fill a levee system gap, which now exists. After completion, the town should be protected to at least the 100 year flood level. There was very little private flood damage in the unincorporated county.



Levasy Levee Damages, Jackson County

Office of Administration

The Office of Administration is the central state agency responsible for ensuring state government accountability, effectiveness and efficiency. The mission of the Office of Administration is to assist and support state departments in the accomplishment of their goals by providing quality services that enhance productivity and management improvement.

The Office of Administration is composed of the divisions of Accounting, Budget and Planning, Data Processing and Telecommunications, Design and Construction, Facilities Management, General Services, Personnel, and Purchasing and Materials Management. Two divisions, the Division of Budget and Planning and the Division of Facilities Management were involved in activities as a result of the Spring 1995 Flooding.

Division of Budget & Planning

The Division of Budget and Planning analyzes budget policy issues, provides fiscal information, analyzes the State economy and tax issues, estimates revenue collections, and reviews legislation with budget implications. This division also prepares the Executive Budget, appropriation bills and oversees agency spending plans.

Flood Response and Recovery

The Assistant Director for Planning for the Division of Budget and Planning is a member of the Governor's Disaster Recovery Partnership. The Partnership was established by Governor Carnahan through an Executive Order, with the goal of bringing government agencies and charitable agencies together in a partnership to improve disaster recovery and response services for disaster survivors.

The Disaster Partnership met throughout the Spring of 1995 at the State Emergency Management Agency facility to keep up-to-date on the flooding in Missouri. SEMA faxed information daily to the Partnership members to keep them informed about the flooding in 1995. The Partnership worked to improve information provided to local unmet needs committees and worked with SEMA to improve disaster response and recovery to the flood victims. Not only was this beneficial to state agencies, but the charitable, non-profit agencies that work with disaster survivors also benefitted from meeting together and improving communication and coordination of response and recovery services.

The Division of Facilities Management

The Division of Facilities Management is responsible for maintaining the entire Capitol Complex. In addition, it also maintains State office buildings in Kansas City, St. Joseph, St. Louis and Springfield. The division also handles all leasing of real property for state government.

Flood Response and Recovery

As water began to rise in the summer of 1995, several state government parking lots had limited or no access. The Division of Facilities Management responded by building a temporary entrance to one parking lot, and expanding the services of the Truman Building shuttle that originates at the Industrial Drive complex. Expansion of shuttle service included the addition of one bus during peak hours and increased the number of parking spaces available to state employees in the Capitol Complex area. In addition, Facilities Management staff worked overtime to ensure parking was maximized at the Industrial Drive complex.

Division of Purchasing - Agency for Surplus Property

The Missouri State Agency for Surplus Property (MOSASP) is responsible for transfers and disposal of State Surplus Property and acquired donated property declared excess by Federal Government Agencies for the distribution of such property to public supported entities.

Flood Response and Recovery

During the Flood emergency, MOSASP maintained its regular organizational structure. The demands and urgency for property during this flood were not as great as in 1993. However, the agency coordinated with SEMA and established teams on 24-hour call to expedite the receipt and distribution of property if necessary.

Lessons Learned

In Fiscal Year 1995 all buildings managed by the Division of Facilities Management remained operational during the flooding. This is a result of lessons learned from the 1993 flood when the EDP/Health Laboratory Building experienced mechanical and electrical problems. The mechanical and electrical systems for the EDP/Health Laboratory Building have since been raised above the floodplain.

Department of Agriculture

Just as our agency responded to the Great Flood of 1993, the Missouri Department of Agriculture took quick and decisive action to help rural Missourians during the Spring 1995 Flooding. Because of the extensive damage that remained from the Flood of 1993, farmers were especially hard hit by the devastating floods. Continued wet weather prevented the planting of crops, caused flood waters to inundate farmlands, and robbed the land of nutrients essential for crop production.

While much attention has focused on crop damage and levee repair, consideration also has to be given to the people and businesses directly and indirectly affected by the flood: agribusinesses, such as grain elevators, barge owners and fertilizer and chemical suppliers; and local communities and businesses whose prosperity relies on the success of rural producers.

As disaster struck Missouri, the department began taking action to coordinate agricultural assistance efforts. This coordination helped to ensure unified and directed action on the part of agencies and organizations directly responsible for providing financial assistance to flood victims. It also helped clarify and communicate the roles of various USDA programs to Missouri citizens who initially turned to the state department for help.

The following commentary describes the efforts of the Missouri Department of Agriculture employed to address the needs of rural flood victims.

Agricultural Emergency Flood Task Force

The Agricultural Emergency Flood Task Force coordinated by the Missouri Department of Agriculture and the Missouri Farm Bureau was initiated on May 31, 1995. The Emergency Flood Task Force brought together agricultural leaders from throughout the state to assess the needs and requests of affected areas and to discuss options for additional actions that might meet those needs. The task force compiled the following objectives:

1. Determine the needs of Missouri farmers;
2. Identify programs available to address these needs;
3. Establish a clearinghouse of information and dissemination; and
4. Outline unresolved issues and problems and initiate strategies to address them.

Consolidated Farm Services Agency - sold about 19,000 crop insurance policies since the Federal Crop Reform Act of 1994 did away with the ad hoc disaster program. The Federal Crop Insurance Program announced that farmers could add certain crops to their insurance coverage until July 31, 1995.

FmHA Emergency Loan Program - loans are available to the counties receiving a disaster declaration.

Natural Resource Conservation Service - held a sign up for farmers to designate land as wetlands and issued variances for crop rotation, structural needs, etc., if they are weather related. The NRCS also implemented the Emergency Watershed Program to provide assistance in rehabilitating levees and stream banks and to clean out ditches. Producers requested a rule that would give the Corps authority to fix primary levees, and the NRCS responsibility for secondary levees. The NRCS also plans to give district conservationists more authority to speed levee repairs. The Emergency Wetlands Reserve Program had about $100 million left from the 1993 appropriation for wetlands reserve, and the NRCS has requested $25 million to be released.

Emergency Conservation Program - has about $5 million left from the 1993 flood for this program to clean up flood damages.

Corps of Engineers - has been working with the NRCS and the Economic Development Authority to bring more levees under the Corps program. For those levees not repaired from the 1993 flood, the Corps is attempting to waive the amount the local district must pay on additional charges. Dredge and fill is an option for levees this year.

University of Missouri Extension - supplies information to county extension offices electronically. Eight regional flood coordinators have been identified, and a packet of information with the most commonly asked questions about planting has been assembled.

Food and Agricultural Policy Research Institute - an estimated $8-9 million is expected to be cut in farm spending in the 1995 Farm Bill. There will have to be an offset to these cuts, which may mean a more difficult recovery from the 1995 flooding, making the weather in 1996 highly important. If farm spending is cut by $10 billion or more, economists predict the current program will have to be scrapped and alternatives sought such as revenue assurance, marketing loans, etc.

Unresolved Issues

Environmental -- There is a great concern among farmers over the restraints placed upon them by environmental programs, such as endangered species and fish and wildlife preservation. It is often not clear which agency program is in effect and no clear coordination between the Environmental Protection Agency, the U.S. Fish and Wildlife Service and the departments of Conservation and Natural Resources.

Levee Repair -- Levee repair decisions, authority, and eligibility continue to be issues, leading many farmers to be disillusioned with the

lengthy process, which is often seen as inefficient and not cost-effective.

Disaster Aid -- The aid available is often only a fraction of what is lost, causing hardship for many farmers. Because so many had not entirely rebounded from the 1993 flood, the agricultural community is especially weak and threatened at this point.

Steering Committee

A steering committee will be established to coordinate a plan of action for Missouri farmers in the face of this recent flooding and to facilitate the activities and progress of the various state and federal farm programs.

The Consolidated Farm Service Agency Disaster Payment Estimates as of Sept 15, 1995:

Direct Disaster Payments - The Ad Hoc disaster program was replaced by mandatory crop insurance. Payments will not be known until the 1995 harvest is complete.

Prevented Planting Payments - An estimated five million acres were initially prevented from being planted due to the flooding, wet weather and adverse conditions.

Emergency Conservation Program - This program is for cleanup and repair of affected land. Three million dollars were allocated to Missouri from Washington, D.C. There is a request in for an additional $1 million.

Conservation Reserve Program - NO acreage was released for hay and grazing land reserved for conservation purposes.

Services Provided to Farmers, Producers and Agribusinesses

The Missouri Department of Agriculture has provided the following services through September 15, 1995 and continuing.

Hay Hot Line - This toll free number, 1-800-887-4429, puts forage suppliers in contact with producers needing livestock feed.

Dead Animal Disposal - Producers can call 1-800-347-1178 for information on acceptable ways to dispose of dead animals.

Weights and Measures - Field inspectors are checking fuel quality and safety measures at locations with gas pumps under water. Telephone: (314) 751-2922.

Agriculture Development Fund - The department will consider easing certain requirements on agricultural loans. Telephone number is (314) 751-2613.

Agriculture Emergency Task Force - The department has brought together agricultural leaders to assess needs and requests of affected areas. This task force has made recommendations for additional and/or waivers that might take care of those needs.

Recommendations

The process for disaster declaration needs to be reviewed.

1. The disaster damage assessment report asks for acres affected by various weather conditions. In most cases, all acres are affected and some counties report as such. Others report only a fraction of the total acres. The questions should be specific as to the acres flooded, acres not planted compared to historical averages, or a report of specific damages that would lead to consistent numbers. They should also be compiled by CFSA systems and sent to us in totals by county, region and state according to the degree of loss. MDA staff compiled the figures by hand on poster board to arrive at totals.

2. The disaster declaration for agriculture is a process that may be outdated. With mandatory crop insurance and no ad hoc disaster program, there is no need for the statewide or county by county declaration. This only triggers loan programs, which could surely be done as applications rise to a predetermined level. The crop disaster declaration could be done by actual losses under the Federal Crop Disaster Program.

3. The Crop Insurance Program needs continued review. The prevented planting option is not adequate in a flood event. Many acres were unrated this year. All acres should have a rating in advance of sign up so farmers can make informed choices.

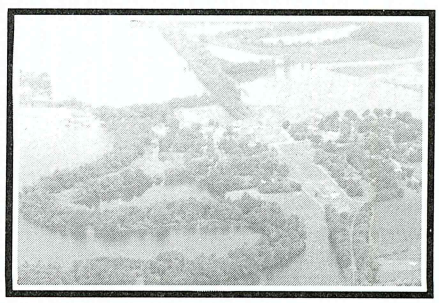
The effort to obtain federal aid needs to be streamlined

1. The Missouri Department of Agriculture needs to work with the United States Department of Agriculture to streamline the procedure for making requests for federal aid. The process is cumbersome, making it difficult to determine initial agriculture damage estimates to present to the Governor's office, Congressional delegation and the media, etc.

More accurate and efficient ways to maintain and obtain information on levees need to be established.

1. Information on existing levees was critically needed when making decisions whether or not to repair or replace them.

2. Since the Flood of 1995, we have not made much progress with identifying and monitoring levee systems, which makes it difficult to assess Corps jurisdiction. This item is a Missouri Department of Agriculture priority.



Allenville, Cape Girardeau County

Department of Conservation

The Department of Conservation experienced damages estimated at $592,000 from spring flooding in 1995. These damages occurred on Conservation areas designed to provide public access to Missouri streams at 22 locations in the following counties: Cole, Franklin, St. Louis, Jefferson, Gasconade and Boone.

Typically, we expect heavy siltation on many of the approximately 250 stream accesses the Department of Conservation manages in the State from spring flooding. This year's spring flooding in east central Missouri was much greater than normal and in addition to siltation caused extensive surface damage to roads and parking areas. We know of little that can be done to better prepare these areas for flooding. We believe they are designed currently to withstand the high waters in the most cost effective manner, based on flood experience. We have experimented with various designs on different stream types over many years to arrive at current designs and believe the cost of repairing damages from flooding is necessary to provide access to Missouri's streams for visitors and citizens.

The vast majority of damages suffered this spring resulted from erosion to interior levees and roads at our Eagle Bluffs Conservation Area in Boone County. This is one of several large wetland areas the Department manages adjacent to the big rivers in Missouri which also typically suffer damage during periods of heavy flooding.

Damages by County

Cole: resurfaced 300 feet of entrance road at the Springtown Access; resurfaced 800 feet of entrance road and the 100 ft x 100 ft parking area at Scrivner Road Conservation Area; resurfaced 200 feet of entrance road and cleared silt from the boat ramp at the Honey Creek Access; resurfaced 200 ft x 75 ft parking area at the St. Thomas access; resurfaced 900 ft of entrance road, a 150 ft x 100 ft parking area and reseeded two acres at the Pike's Camp Access; reseeded one acre at the Mari-Osa Access; resurfaced a 150 ft x 75 ft parking area, removed silt and debris and reseeded 1 acre at the Moreau 50 Access; removed silt and debris, resurfaced a 200 ft x 100 ft parking area and rip-rap 300 ft of eroded river bank at the Marion Access; removed silt for the Jefferson City Airport Hanger.

Portage Des Sioux conservation access ramp used during the rafting operation, courtesy Mo . National Guard

Franklin: removed silt, resurfaced 300 ft of entrance road and a 100 ft x 100 ft parking lot at Union Access; resurfaced 600 ft of entrance road and a 75 ft x 30 ft parking area at Little Indian Creek Conservation Area; resurfaced 200 ft of entrance road and a 200 ft x 100 ft parking area at Sand Ford Access; resurfaced a 50 ft x 75 ft parking area at Wenkel Ford Access.

St. Louis: resurfaced 300 ft of entrance and a 150 ft x 100 ft parking lot at the Allenton Access; resurfaced 500 ft of entrance road at the Swiftwater Bend Access; resurfaced 500 ft of entrance road, a 200 ft x 200 ft parking lot and repaired approximately 400 ft of eroded river bank at Pacific Palisades Access; resurfaced 200 ft of entrance road and a 150 ft x 100 ft parking lot at Howell Island Conservation Area.

Jefferson: resurfaced a 100 ft x 50 ft parking lot at Jeremiah Blackwell Access; resurfaced 200 ft of entrance road at Merrill Horse Access.

Gasconade: resurfaced a 100 ft x 75 ft parking area at Tea Access; resurfaced 300 ft of entrance road and a 150 ft x 75 ft campground at Fredricksburg Ferry Access; resurfaced a 200 ft x 100 ft parking area at Gasconade Park Access.

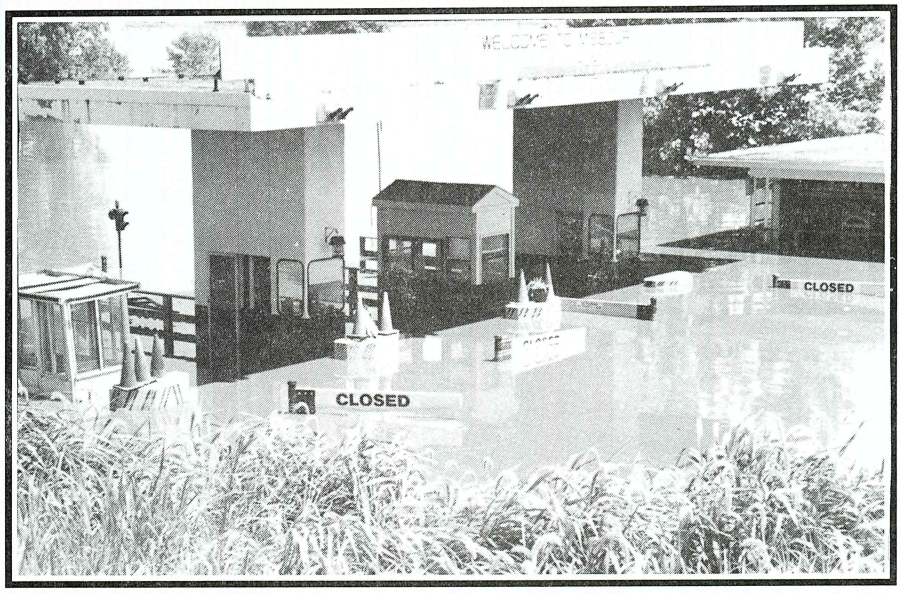
Boone: resurfaced 300 ft of entrance road, a 200 ft x 150 ft parking area and reseeded two acres at the Hartsburg Access; removed debris, repaired eroded levees, reseeded 16 miles (or 154 acres) of levees and resurfaced five miles of roads at the Eagle Bluff Conservation Area.

Department of Corrections
Division of Adult Institutions

The Response

Although the Department of Corrections was involved to some degree in the 1995 flood relief activities, agency involvement was somewhat less than during the catastrophic 1993 flood.

Corrections in Missouri did not suffer from direct effects of the flood since Renz Correctional Center was abandoned after 1993. There was, nonetheless, extensive assistance given to various communities and agencies during peak flood periods.



By Mo. Highways & Transportation

Highlights of inmate assistance follows:

* May 17-18: inmates from the Algoa Correctional Center worked on sandbagging operations at the Jefferson City Airport and Maintenance Center. The unit sent 46 inmates and 2 staff on the 17th and 70 inmates and 1 staff on the 18th. A break on the levee protecting north Jefferson City caused the airport to go underwater on the 19th.

* May 17-20: inmates from the Western Missouri Correctional Center in Cameron worked on sandbagging efforts in Carrollton. The unit sent 19 inmates and 4 staff on the 17th; 20 inmates and 2 staff on the 18th; 20 inmates and 2 staff on the 19th and 20 inmates and 2 staff on the 20th.

* May 18 and 19: inmates for the Renz Correctional Center worked on sandbagging efforts in the town of Hartsburg. The unit sent 8 inmates and 2 staff on both the 18th and 19th before the river broke a levee and flooded the area.

* May 19-21: inmates from the Chillicothe Correctional Center worked on sandbagging in the Carrollton area. The unit sent 8 inmates and 1 staff on the 19th; 8 inmates and 2 staff on the 20th and 8 inmates and 1 staff on the 21st.

* May 19-June 8: inmates from the Farmington Correctional Center worked on sandbagging efforts in the communities of Ste. Genevieve, St. Charles, Crystal City, Festus and Kimmswick. Inmates and staff participation varied from 20 inmates and 2 staff on May 23th to 206 inmates and 28 staff on 20th. In June, the inmate sandbagging efforts tended to stabilize at 25 inmates and 3 staff. The unit sent 88 inmates and 8 staff on the 19th; 206 inmates and 28 staff on the 20th; 93 inmates and 19 staff on the 21st; 100 inmates and 15 staff on the 22nd; 20 inmates and 2 staff on the 23rd; 24 inmates and 4 staff on the 24th; 40 inmates and 7 staff on the 25th;

In the St. Charles County area: 138 inmates and 20 staff from the Farmington Center assisted by 22 staff from the Missouri Eastern Correctional Center and 4 staff from the St. Louis Community Release Center on the 26th; 48 inmates and 8 staff from the Farmington Center assisted by 22 staff from the Missouri Eastern Correctional Center and 4 staff from the St. Louis Community Release Center on the 27th; there was no inmate assistance on the 28th;

All staff on the following dates were from the Farmington Correctional Center. 30 inmates and 9 staff on the 29th; 48 inmates and 8 staff on the 30th; 26 inmates and 4 staff on the 30th; 25 inmates and 4 staff on June 1st; and 25 inmates and 3 staff on June 2nd, 3rd, 5th, 7th and 8th.

* May 20: 24 inmates and 2 staff from the Boonville Correctional Center worked on sandbagging in Petersburg.

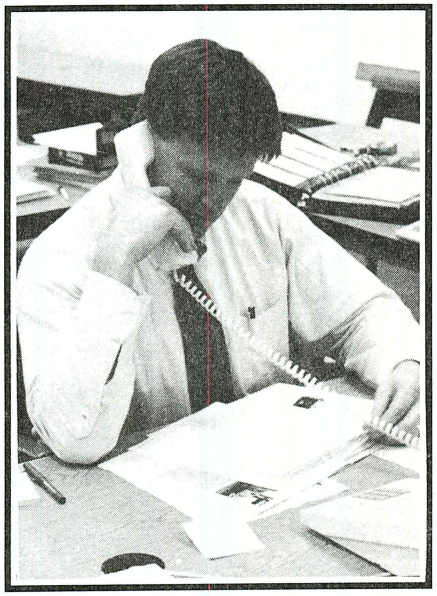
Lessons Learned

If a single important lesson was learned from the 1995 flood, it would be we must always be prepared for the unexpected. The experiences and lessons learned in 1993 were most beneficial in preparing our agency for the 1995 flood and other situations which may occur in the future.

Department of Economic Development

Missouri Division of Transportation
Office of Railroad Safety

Once the State Emergency Operations Center was activated, members of the Missouri Division of Transportation Office of Railroad Safety activated an emergency operations cell at SEMA.



The Division monitored railroad tracks, lines and bridges throughout Missouri that were threatened by flashflooding, flooding and washouts. Railroad Safety monitored: the Atchison Topeka Santa Fe Railroad, the Burlington Northern Railroad, the Chicago and Northwestern Railroad, the Gateway Western Railroad, the Missouri Northern Arkansas Railroad, the Norfolk Southern Railroad, the SOO Railroad, the Southern Pacific Railroad, the Union Pacific Railroad and the Terminal Railroad Association with flooded tracks in tunnels in the vicinity of the Arch.

Total physical railroad damages for the 1995 flooding were estimated at $1.9 million.

The Union Pacific Railroad reported $672,000 in physical track damages for seven locations. The locations were the West Labadie to Jefferson City run, Crystal City, DeSoto sub, Kansas City area, Jefferson City to Kansas City run, Riverside to Crystal City run, and the Kirkwood to West Labadie run.

The Atchison Topeka and Santa Fe Railroad reported track damage losses at $32,000.

The Gateway Western Railroad reported track damage losses at $500,000.

The Norfolk Southern Railroad reported $652,000 in physical track damages.

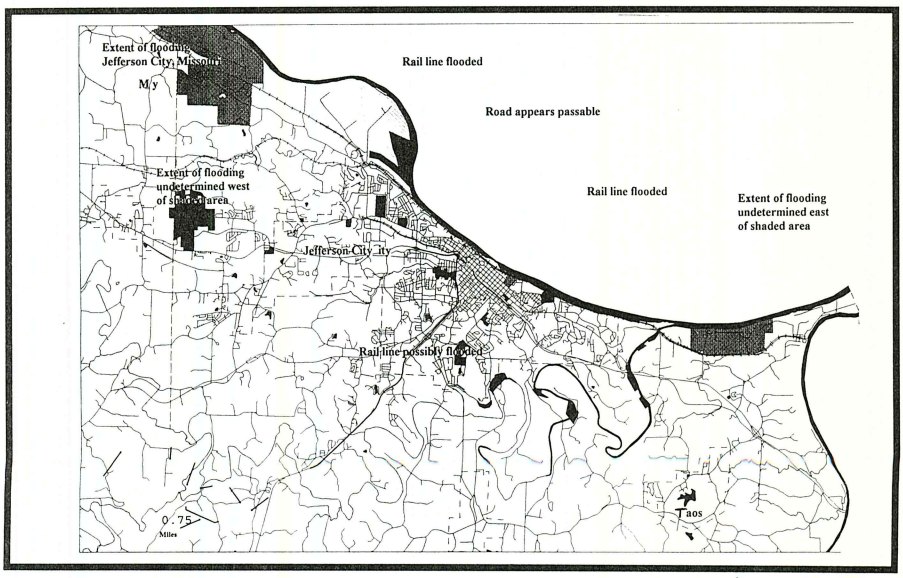
The Missouri Northern Arkansas Railway Company reported $14,800 in physical track damages.

Community Development Block Grant Program

The Community Development Block Grant (CDBG) Program received $1.1 million in supplemental flood recovery funds to help three counties and one community complete their flood buyout program.

St. Charles County received $750,000 to buy 50 homes on their waiting list. Warren County received $179,400 to purchase six additional homes. Franklin County received $48,836 to be used for the local match to the federal buyout program. Waynesville received $123,891 to increase the original buyout to buy properties adjacent to the target area.

CDBG officials assisted SEMA officials touring the 16 applicant communities for the 1995 Missouri Buyout Program. Based on the Governor's buyout criteria (substantial damaged residential homes in the 100 year floodplain and a cost effective project), the group narrowed the 1995 buyout projects to three communities: Portage Des Sioux, the City of Cape Girardeau and Commerce. The group also agreed that if funds became available from the 1993 Buyout Program community closeouts, the available funds could be used to help 1995 communities with their buyouts.



Digitized map based on FEMA disaster satellite information

Department of Natural Resources

The Department of Natural Resources (DNR) is responsible for the management and regulation of natural resources in the State of Missouri. The department is organized into five divisions. The Division of Environmental Quality (DEQ) has authority for air pollution control, environmental services, hazardous waste management, land reclamation, public drinking water, soil and water conservation, solid waste management and water pollution control. The Division of State Parks (DSP) has authority for state park operations, historic sites and preservation, natural history and outdoor recreation. The Division of Geology and Land Survey (DGLS) has authority for geological surveying and mapping, dam and reservoir safety, land survey, water resources, environmental geology and wellhead protection. The Division of Energy (DE) has authority for energy and conservation, community services and low-income weatherization assistance. The Division of Administrative Support (DAS) supports divisions with centralized administrative services including budget, internal audit, receipts and reporting, management information services, general services, public information, personnel and accounts payable.

By Missouri National Guard

The Response

DNR's response to the 1995 flood, in comparison to the 1993 flood, was swifter, more coordinated and more effective. This was due mainly to the three factors. (1) Personnel were more experienced. Many people who responded to the 1993 flood were still present and responded to the 1995 flood. The experiences gained during the 1993 flood were used. (2) Personnel were better trained. The department had participated in all the training sessions conducted by the State Emergency Management Agency (SEMA). Also, the department's flood coordinator was present at all the daily briefings conducted by SEMA at the Emergency Operations Center. (3) Procedures were better coordinated. This was because of the critique of the department's response to the 1993 flood.

Regulatory flexibility exercised by DNR included:

- Temporarily lifted the State solid waste disposal tonnage fees so flood debris could be accepted without this cost at permitted landfills. Fees remained in place for waste not related to the flood, and landfill operators who did charge tipping fees for flood debris were directed to continue to collect and remit tonnage fees for all flood debris and municipal waste they accepted.

- Temporarily lifted the State landfill ban on yard waste to allow flood-generated yard waste to be disposed of in landfills.

- Temporarily waived the regulatory requirements for small quantity hazardous waste generators.

- Temporarily relaxed State regulations by allowing local governments to establish temporary collection sites for flood debris simply by calling the department for registration numbers.

- Temporarily relaxed the State regulation on "Open Burning" unless there was a conflict with local authorities.

- Issued emergency permits to three Missouri Highway and Transportation Department maintenance facilities to serve as temporary storage areas for drums of hazardous material.

The Division of Environmental Quality

On May 17, 1995, the division initiated the major disaster protocol that had been developed after the 1993 flood. This enabled the division to respond to the disaster immediately. The protocol was concluded on June 28, 1995.

- Prepared daily flood reports which detailed each program's response to public drinking water plants, sewer treatment plants, landfills or hazardous waste sites. The report was distributed to DNR management and SEMA as the primary source of information.

- Distributed "Flood Help for Missouri Citizens" fact sheets on issues including: what to do with flood debris, restoring drinking water, water pollution, household chemicals and hazardous waste, septic tank failures and flood recovery for historic buildings.

• Distributed the detailed guidance document "Information for Local Governments - What to Do After the Flood" which clarified regulations and permitting requirements.

• Established the Technical Assistance Program (TAP) toll-free number to answer inquiries from the public.

• The Regional Office monitored approximately 30 wastewater treatment plants. Four wastewater treatment plants flooded. This compared to approximately 150 wastewater treatment plants impacted in 1993 of which 45 flooded. Two boil orders were issued for public drinking water supplies compared to 24 in 1993.

• The Environmental Services Program (ESP) reported less than 12 drums and three fuel tanks were retrieved. Their observation was that containers had not been returned to the floodplain after the 1993 flood.

The Division of State Parks

• Flood Insurance: Approximately 30-35 policies were written on Division of State Parks facilities because of the 1993 flood.

• Communications: Response to the flood of 1995 was accomplished immediately as flood recovery communications, documentation and accounting techniques were in place and improved.

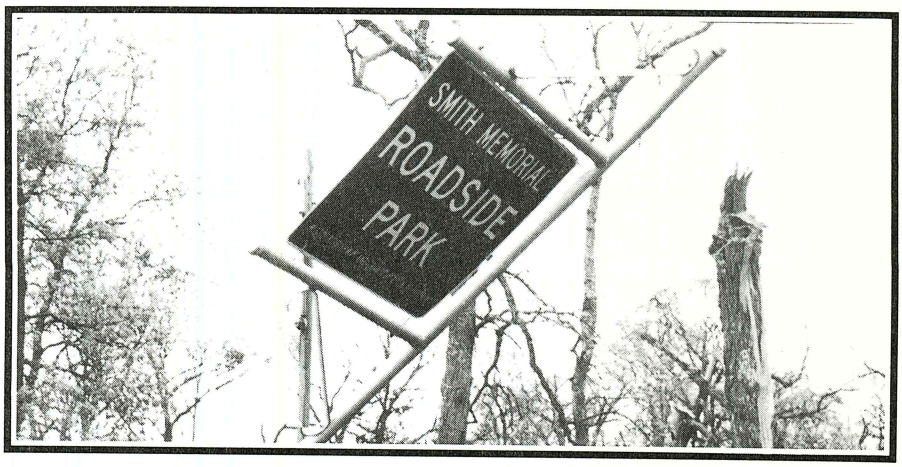
• Two state parks offered flood victims free use of camping facilities.

• Design Revisions: Construction details and techniques were employed that minimized the impact of damage to state facilities. In 1993, 18 bridge structures were damaged. After redeveloping a bridge abutment detail, no bridges were damaged in 1995.

• All parks located in flood zones had flood emergency plans in place and revised to minimize risks and property damage.

• Recommendations have been made that minimize our risk and exposure. Specific project recommendations include:

1. Trail of Tears lagoon switching to an alternate treatment.
2. Lowering of the wing dike at Trail of Tears harbor.
3. Park facilities located in floodplains are redesigned for flood protection (block construction - mobile structures).
4. Group camp at Sam A. Baker was relocated from river corridor.
5. Elevate the Big Oak State Park residence and shop.



• Conceptual Development Plans have been prepared for several state parks to relocate development: Bennet Springs State Park, Robertsville State Park, Wakonda State Park.

The Division of State Parks also experienced, at many of its facilities, the fostering of a positive and cooperative spirit between community and park or historic site. This spirit has affirmed the importance of the park to the community and the community's role with the park.

July 4, Moberly Tornado

• DNR's Northeast Regional Office (Macon) worked with the community and National Guard to permit open burning of certain debris.

• State tonnage fees for waste taken to the landfill were waived if the landfill waived its tipping fees.

• The prohibition of disposal of yard waste in landfills was waived, allowing yard waste generated as a result of the tornado to be disposed of in sanitary or demolition landfills.

• Permitted landfills, transfer stations and other processing facilities to accumulate, store and process tornado debris upon registration with DNR

• Staff worked with cleanup crews to provide technical assistance for proper disposal of damaged transite-siding containing asbestos.

Areas of Excellence

• The training exercises conducted by SEMA before the emergency was of great benefit to the department staff who responded to the emergency on a daily basis.

• The daily briefings conducted at the EOC gave staff members of state agencies an opportunity to converse face-to-face. This was a great benefit to everyone involved in the response operations.

Lessons Learned

The training and experience exhibited during the 1995 flood shows the importance and necessity of these factors. Time and personnel changes can rapidly deplete these resources. The department should continue to encourage and participate in the training exercises conducted by SEMA.

Department of Elementary and Secondary Education

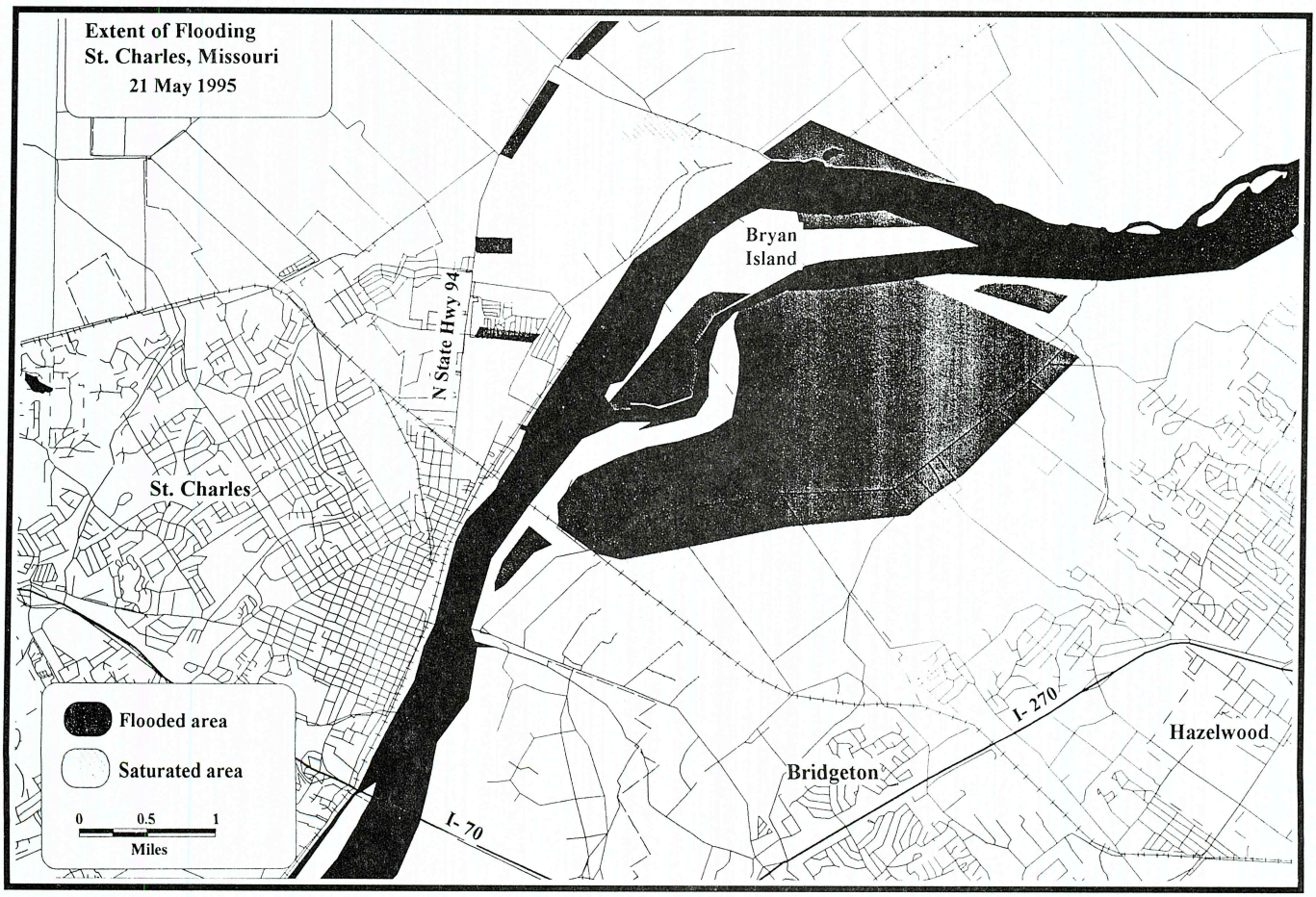
The Recovery

Many of the school districts affected by the 1995 flooding had sustained damages in the 1993 flooding. There were fewer than 5 calls from schools asking for assistance. The school superintendents were referred to State Emergency Management Agency (SEMA) and the Federal Emergency Management Agency (FEMA) for disaster assistance if the school buildings sustained physical damage.

Schools who suffered a loss of revenue from the flooding were referred to the U.S. Department of Education Impact Aid program.

After the 1993 flooding, public schools learned who they needed to contact for help and what kind of help they could expect to receive. The calls the department received in 1995 were more for reassurance or to make sure the school district was following procedures.

Digitalized satellite map shows areas of 1995 flooding in St. Charles, Mo.



University Extension

University of Missouri System, Lincoln University

University Extension is the outreach arm of the University of Missouri campuses in Columbia, Kansas City, Rolla and St. Louis and of Lincoln University in Jefferson City. From offices in every county, University Extension specialists conduct educational programs and distributes research information that Missourians apply in their lives.

University Extension specialists on the campuses and in every county where there was damage from long periods of excessively wet weather and flooding responded to the need for flood-damage prevention, cleanup and restoration information during 1995.

Activities

Since one of the most serious threats during 1995 was economic damage to Missouri's agricultural industry from delayed planting due to continuing rains, University Extension specialists provided farmers with information on obtaining best results from late-planted crops and the use of fertilizers and chemicals under wet soil conditions. A Wet Weather Task Force was formed at UM-Columbia to develop information on delayed planting, alternative crops, field preparation, insect problems, fertility recommendations. The committee worked directly with farmers, held local meetings, developed news releases and developed a "key" question and answer list for the use of campus and field specialists. Field specialists distributed the information in face-to-face meetings, through printed and electronic newsletters, and the news media.

An electronic listserve was established by the UM-Columbia College of Agriculture, Food and Natural Resources to provide immediate answers to questions being fielded by field specialists and other faculty, and to distribute information and recommendations of general interest to all agricultural faculty.

There was flooding where river levees had not been repaired properly after the 1993 flood; University Extension specialists provided counseling on repairing levees to meet local needs.

Specialists continued to work to bring sand-damaged farmland back into production. Demonstration plots were developed to show farmers techniques for revegetating land damaged by flooding.

The threats of flooding and economic hardships caused by continuing rains led to increased stress for many affected families. Detailed information on how to deal with stress and other personal problems was provided by University Extension specialists. Specialists recorded helpful information and distributed it to the public with the cooperation of radio stations. Information on how to serve flood victims was sent to human service providers by newsletter.

Publications prepared and distributed by University Extension specialists providing information on health and safety before and after a flood were distributed to people and agencies in counties affected by flooding.

University Extension specialists provided flood preparation and recovery information for homeowners in flood-prone areas. Information on cleanup strategies for restoring flooded basements was distributed through spots on a Kansas City television station.

A demonstration on how to prepare a flood-prone-area home to avoid or reduce flood damage was prepared and training activities conducted in St. Charles County. Information on this technique also was distributed through spots on a Kansas City television station.

Anticipating economic problems stemming from the 1995 floods and late planting season, financial counseling services were provided by University Extension specialists to farmers whose crops were damaged or incomes reduced.

University Extension flood recovery information was distributed at the Disaster Assistance Center in St. Louis.

A flood assistance resource directory was produced and distributed in St. Charles County.

Lessons Learned

In some cases, levees were improperly repaired, and landowners need help in educating the controlling agencies as to what is needed.

Financial counseling was needed by farmers whose income was affected by three years of flooding and wet weather.

Personal counseling was needed to help families faced with continuing financial loss and stress caused by flooding and wet weather.

In repairing flood-damaged farmland, plowing seems to do little more than bury the problem. Research and demonstrations of recovery techniques were needed on revegetating heavily sand-damaged soils.

University Extension must keep updating its flood recovery information based on the latest research.

University Extension field specialists must maintain working relationships with personnel of other crisis organizations.

University Extension must continue to use its communications protocols and technology so that it will be prepared to move information speedily to those who need it.

Department of Health

The Missouri Department of Health (MDOH) is responsible for statewide public health protection.

As the water started to rise and pose potential problems in 1995, the Department of Health's Emergency Response Committee met and reviewed the flood situation. Two members of the MDOH Emergency Response Committee attended the daily briefings at the State Emergency Management Agency's Emergency Operations Center, and then discussed the daily situation reports with the appropriate MDOH staff.

Although the Emergency Response Committee was on alert, it was not necessary to activate the Department Situation Room.

The Department of Health staff and county staff, including sanitarians, public health nurses, communicable disease coordinators, et al. were able to handle adequately the potential problems in their respective areas. This can be attributed to the experiences of the 1993 flooding that made us better prepared, better coordination between agencies, and the fact that the Spring 1995 Flood was not as extensive as the 1993 Flood. In addition, a lot of the areas involved in the 1993 Flood were uninhabited and/or involved in "buy out" negotiations.

The Response

- MDOH maintained daily contacts with the district offices and local health departments.

- MDOH staff performed an assessment of the hospitals located in and near potential flood areas and determined these facilities were not being affected.

- MDOH representatives coordinated with the Red Cross and Salvation Army on health and safety inspections at feeding sites and shelters.

- District and county officers responded to telephone requests for guidance and more information.

House wrapping for flood proofing, by University Extension

- The local health departments were open to walk-in visits for immunizations.

Activities accomplished during the 1995 flooding included:

Community Sanitation -

- Eating establishments affected by flooding were inspected by district and county environmental health sanitarians before reopening.

- More counties in the Southeastern District were affected by the flooding along the Mississippi River in 1995 than in 1993 due to the Ohio River's flood stage during the same period. The district initiated a daily report from the affected counties to assess changing conditions. In the Southeastern District, activities included:

1. Providing consultation to the public and the local health department staff.

2. Providing water bottles to local health departments for water samples.

3. Providing laboratory testing for all water samples submitted by the local health departments.

4. Responding promptly to requests for assistance in retrieving and identifying "suspect" contaminants in Ste. Genevieve County and informing the local health department immediately. This prompt response and coordination of necessary agencies perhaps prevented undue alarm and consternation in the community.

Disease and Injury Surveillance -

The 1995 Flood prompted surveillance activities, i.e., reports from district offices and local public health agencies, to determine its impact and whether the Missouri Department of Health needed to initiate different activities. No extraordinary activities were undertaken.

Five flood-related deaths occurred in Missouri between May 8 and May 27, 1995. All were males, aged 21-84. Two were swimming in flood-swollen rivers. Three were vehicle-associated with two entering flood waters beside or across the roadway and one colliding with another vehicle on a flood-covered roadway.

Vector Control -

Surveillance on the mosquito population, which was initiated through CDC funding following the Flood of 1993, continued to indicated that arbovial disease potential did not occur.

Missouri Highway and Transportation Department

The Response and Recovery

The rains began on May 12 and the familiar term "flood waters" was all too familiar to cities and towns such as Hermann, Washington, St. Louis, Alton, Lexington, Waverly, Boonville, Glasgow and so many others. The flood of 1995 caused rivers to flood and it was July 14 before the last closed road in Missouri would reopen to traffic.

The Governor declared a state of emergency on May 17. Missouri River crossings at Lexington, Waverly, Glasgow, Boonville, Hermann, Washington and West Alton plus the Mississippi River crossing in Alton would once again be closed due to flood waters.

Missouri River Flood Facts

Approximately 291 State highway routes were closed at the same time during the flood.

70 counties reported at least 1 road in the State highway system closed during the flood.

Major state highway routes were closed due to the flooding Missouri River at Lexington, Waverly, Glasgow, Boonville, Hermann, Washington and Alton.

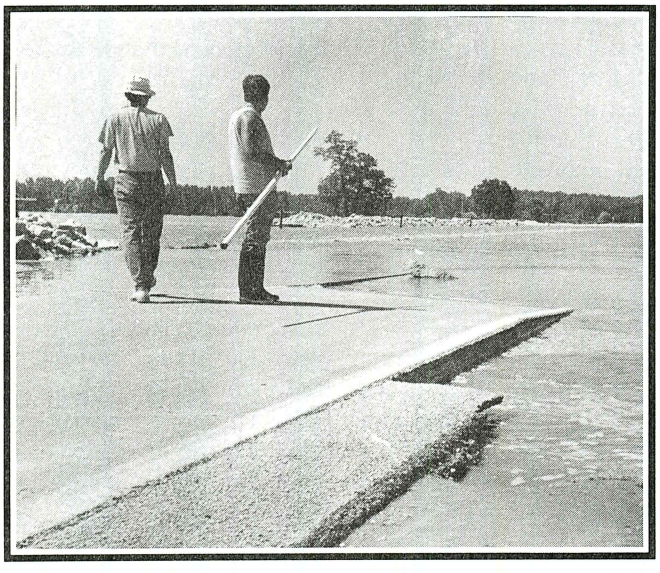
Route 67 was closed due to the flooding Mississippi River.

Between Kansas City and St. Charles, the Missouri River could only be crossed at Miami, Rocheport and Jefferson City.

Damage assessment forms in the amount of $3,950,259 at 39 locations have been approved for reimbursement by the Federal Highway Administration. A few damaged sites are still being reviewed as of August 18, 1995.

For May and June only, the Missouri Highway and Transportation employees worked a total of 22,410 hours at floodfighting and repairing damaged roads and bridges.

Five of our 10 districts were approved for federal reimbursements due to flood damage. The total estimated damages of $3,950,259, with the district and their estimated damage



are as follows: District 2 (Macon) = $958,734; District 3 (Hannibal) = $1,923,550; District 4 (Kansas City) = $162,570; District 6 (St. Louis) = $456,000 and District 10 (Sikeston) = $212,405. Damage to active construction projects was estimated at $237,000

Routes with Major Damage

Route 65 (Carroll County) damage estimated $275,000

Route 24 (Carroll County) damage estimated $112,980

Route 240 (Saline County) damage estimated $106,355

Route 47 (Warren County) damage estimated $688,250

Route 19 (Montgomery County) damage estimated $589,000

Route 36 (Marion County) damage estimated $200,200

Route 22 (Audrain County) damage estimated $185,000

Route 94 (St. Charles County) damage estimated $145,000

Moberly, July 7, tornado

Cleared electric wires and wind blown debris from state roads.

Areas of Excellence

There were no severe injuries to our workers during the 1995 flood.

Cooperation with SEMA, National Guard, Corps of Engineers, various law enforcement agencies, and other state agencies was excellent

Routes with heavy damage such as highways 19 and 47 were being backfilled with heavy rock while the current was still swift and the road under water. This allowed the highways to be opened to one or two lanes as soon as the highway emerged and a gravel driving surface could be applied.

General road conditions were available on a statewide toll free telephone number.

Lessons Learned

Breached and or failing levees can alter crest predictions significantly.

Damaged highways that were repaired in 1993 and 1994 were filled with heavy rock. Although this does not slow erosion of the highway during high water, it is still vulnerable to the ravaging Missouri or Mississippi Rivers.

Department of Labor and Industrial Relations

The Response and Recovery

The Department of Labor and Industrial Relations was heavily involved with providing assistance to many citizens as a result of the storms and flooding that damaged many Missouri communities in the late spring and summer months of 1995. The Department's Office of Legislation and Public Information served in the role of providing public information releases throughout Missouri.

The Department's unemployment assistance, work place safety inspection services and prevailing wage information news releases were widely publicized in local community papers, and broadcast on local news and radio programs. Radio and television stations in Missouri, Kansas and Arkansas regularly contacted the Department for updates on how people could receive assistance relating to unemployment benefits, business safety inspections and prevailing wage information.

On May 23, 1995, the Department issued a news release to inform people that the Division of Labor Standards would assist employers with assessing business and work place damages. On June 14, the first of the disaster unemployment assistance news releases was issued to announce the first 24 counties that were eligible for individual assistance in the form of unemployment benefits. Each time additional counties were declared as disaster areas a news release was issued. Persons living or working in the declared areas had 30 days to file their unemployment claims. Follow-up news releases were sent out approximately two weeks prior to deadline filing dates so that local media could keep their communities informed.

The announcement dates for the 61 counties (and the City of St. Louis) declared as eligible for Individual Assistance were:

- June 14, 1995 -- Benton, Boone, Callaway, Carroll, Cape Girardeau, Clark, Cole, Franklin, Gasconade, Jefferson, Johnson, Lincoln, Miller, Mississippi, Montgomery, Osage, Ray, St. Charles, St. Clair, St. Louis, Ste. Genevieve, Scotland, Scott, Vernon and the City of St. Louis.

- June 21, 1995 -- Adair, Barry, Cooper, Jackson, Lewis, Newton and Pemiscot.

- June 26, 1995 -- Andrew, Atchison, Bates, Camden, Chariton, Daviess, DeKalb, Gentry, Henry, Howard, Jasper, Lafayette, Linn, Macon, Maries, McDonald, Moniteau, Morgan, New Madrid, Perry and Warren.

- July 18, 1995 -- Barton, Cass, Dallas, Nodaway, St. Francois, Saline, Stone and Sullivan.

- July 25, 1995 -- Mercer.

A special news release was issued on June 21, 1995, to inform the public of the change in federal guidelines for disaster unemployment assistance. The changes in the federal disaster unemployment assistance regulations were provided to the States in mid-May 1995. The changes allowed individuals who earn their income as part of family unit working in the same self-employment business, such as a family farm, to allocate the income equally among the members who participated in the business. As a result, both the husband and the wife were eligible to file for disaster unemployment benefits.

In the past, the rules only allowed disaster unemployment benefits to those individuals who reported self-employment income on their federal income tax returns. The changes were prompted by some of the problems identified from the 1993 natural disasters in Missouri and other states.

The Public Information staff implemented notification procedures that included sending facsimiles of Department news releases to contacts with agricultural related interests. The Missouri Department of Agriculture, Missouri Farm Bureau, county extension service, the Federal Emergency Management Agency (FEMA), and the State Emergency Management Agency (SEMA) were also included in the distribution of all news releases.

Staff from the Department's Division of Labor Standards and Division of Employment Security participated in daily briefings at SEMA headquarters from mid-May through early June to keep abreast of flood damage assessments.

Division of Employment Security

The daily briefings were beneficial to the Division of Employment Security in its efforts to be ready to take unemployment claims as soon as the disaster declarations were announced.

Federal Disaster Unemployment Assistance (DUA) regulation changes went into effect on May 11, 1995. With the impending disaster declaration, the Division's immediate needs were to revise the DUA claim forms, update claim procedures, make changes in computer programs, and develop training packages for staff in 41 field offices and the central office DUA Payment Unit.

Following the flood of 1993, the Division established a DUA task force. The task force members represent various agency sections and the members recommend ways of improving service delivery to individuals who became unemployed due to major disasters. The task force became known as the Disaster Assistance Response Team (DART) in

early 1995. The DART members meet periodically to update and maintain manuals, forms, and procedures that may be affected by federal regulation changes. For the 1995 disasters, the preparations made by the DART ensured the Division's prompt response to the citizens when the disaster declarations were issued.

On June 14, 1995, the Division of Employment Security sent representatives to a FEMA sponsored disaster meeting in St. Charles for public and volunteer agencies involved in disaster assistance efforts. A member of the Division's DART presented the information on the regulation changes for the DUA program and explained how the changes benefit self-employed individuals and farm families who were affected by the flooding.

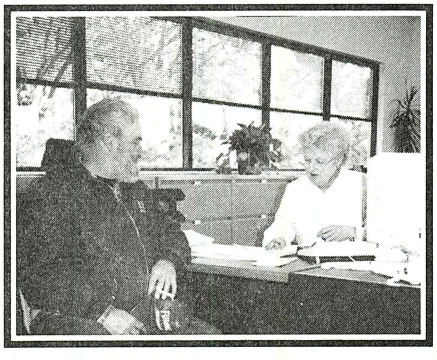
The Division located staff at the FEMA Disaster Field Office in St. Louis from June 22 through July 2, 1995. The purpose of the center is to provide a location where applicants can make registration to the toll free national tele-registration center in Denton, TX, and speak with representatives from various agencies. Employment Security staff provided information by answering individual's questions and making DUA informational brochures and flyers available. The Division also provided FEMA with information sheets and pamphlets for their door-to-door canvassing of St. Louis neighborhoods.

A toll-free number (800-788-4002) was established and publicized by the Division for inquiry and information on DUA prior to the disaster declarations. The number remains operational for inquiries related to the status of payments.

Two casinos in the St. Louis area were closed because of flooding. The casino employees had returned to work before the initial disaster declaration was issued. The Division prepared informational posters and delivered them to the casinos to help employees be aware of their right to file for federal DUA and to assist the employees with questions on how to file their claims.

Prior to the initial disaster declaration, the Division assisted many workers (who were unemployed as a direct result of the flood) by processing regular unemployment compensation claims. The State's regular unemployment insurance program is the first line of defense for helping people who are unemployed due to a disaster.

Regular state unemployment benefits in the amount of $20,970 have been paid to 677 individuals for disaster related claims through August 11, 1995. Farmers and self-employed individuals who do not qualify for the State's regular unemployment benefits usually qualify for federal DUA. Through August 11, 1995, $437,352 in federal DUA benefits have been paid to 597 individuals. The disaster assistance period does not end until December 16, 1995, therefore, additional state unemployment and federal DUA benefits will continue to be paid into December 1995.



Problems Encountered by the Division of Employment Security

Problems where incurred when regional FEMA staff and SEMA staff informed public officials in counties were public assistance had been declared that individual assistance was included. Federal disaster unemployment assistance is not available without a declaration of individual assistance so the incorrect notification to counties by Emergency Management staff created confusion for everyone involved. The U.S. Department of Labor assisted the Division in obtaining clarification from FEMA in Washington, D.C. FEMA verified that individual assistance must be separately declared in order for the federal Disaster Unemployment Assistance program to be activated. Through the coordinated efforts between the Emergency Management agencies, the Department's Office of Legislation and Public Information and the Division's staff, the correct information was provided to the affected communities.

Division of Labor Standards

Staff from the Division of Labor Standards Wage and Hour Section responded to communities in need by telephoning and visiting many areas within Missouri. The initial calls and visits were to Nevada, MO, to assist in assessing damages to public facilities damaged by the wind storms. All total, the disaster investigators and Division staff made 527 contacts with 98 public entities in 44 counties.

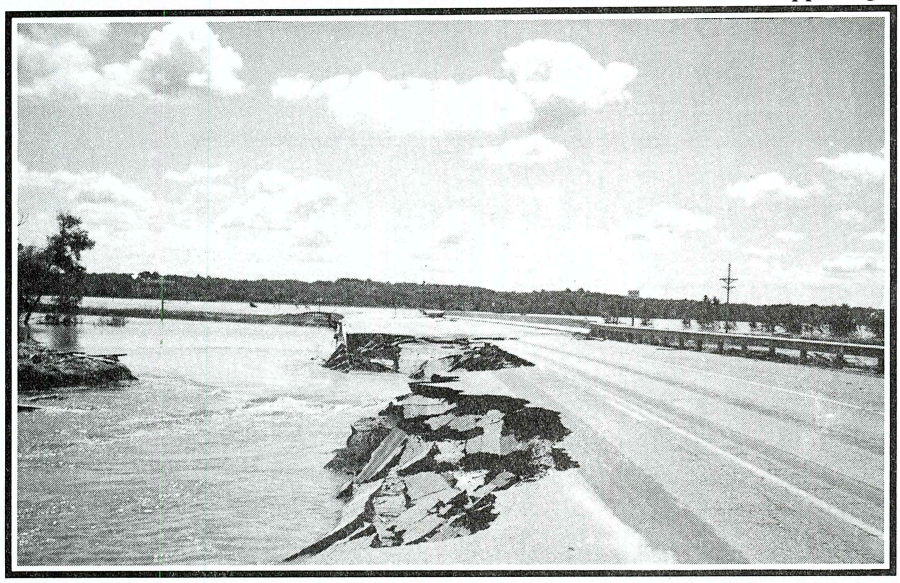
Disaster investigators visited many communities to discuss the application of Missouri's prevailing wage laws for the repair and replacement of public facilities. As of early August 1995, 30 public entities had requested Missouri's Annual Wage Order No. 2. The information provided was for the prevailing wage data for various counties and communities throughout Missouri.

Disaster investigators attended and assisted in 19 official briefings relating to the repair and replacement of public facilities. County officials, community leaders and contractors for public work projects were present at the meetings to ask questions about applying for the prevailing wage laws. The average attendance at the meetings was approximately 20 people.

In 1995, there were many instances of communities just getting ready to rebuild or repair public facilities from the flooding in 1993. For many communities, it can take several months or years to generate or dedicate funds for the repair or replacement of their public facilities. For this very reason, the assistance role of the Division will be ongoing.

Department of Mental Health
The Response and Recovery

On May 17, 1995, SEMA activated the Emergency Operations Center in Jefferson City to respond to storms, wind and flooding beginning May 8. This was eventually declared as FEMA 1054. Ironically, the state response began two days following the final day of crisis counseling services for FEMA 995 (The Summer Flood of 1993).



By Mo. Highways & Transportation

Department of Mental Health (DMH) responded immediately. DMH issued a press release on May 18 dealing with disaster fears and providing phone numbers and contact names for crisis counseling services in impacted areas. Due to the end of the year budget review, funds were identified on May 19 to provide crisis counseling services through June 30. Assessment of need began May 19 and counselors were in place in high impact areas. Through participation at the state and local level, DMH learned that:

- Communities and persons directly impacted were devastated by the immediacy of repeat flooding so soon after the disaster declarations of 1993-94 (FEMA 989, 995, 1006 and 1023). For some, 1054 is the 5th disaster in two years!
- Caregivers echoed the sentiment of their clients: "This can't be happening again."
- Through Governor Carnahan's Disaster Recovery Partnership (DRP), other disaster service agencies, including SEMA and FEMA, requested crisis counseling services from DMH for Missourians impacted by this disaster.
- DRP discussions focused on the unique nature of this disaster including a strong "blame the victim" public attitude. Ironically 2/3 of persons registering for FEMA assistance had not received government disaster aid since the '70's or even the '50's.
- Many persons accessing crisis counseling did not apply for FEMA aid. For example, individuals and families in Warren and Jefferson Counties, St Charles, Ste. Genevieve, Cape Girardeau and Commerce were reluctant to apply to FEMA because they failed to maintain or obtain flood insurance.
- Cynicism is high and there is no faith in government assistance. In Marthasville, the Red Cross reported 102 families impacted by FEMA 1054 yet only 21 registered with FEMA as of Aug. 10, 1995.
- Most helping agencies have ongoing, non-disaster related missions and it has become increasingly difficult to stretch financial and human resources to meet the challenges of the new disaster.
- FEMA 1054 cannot be classified as a separate disaster; in many ways it is the straw that broke the camel's back in regard to public sentiment, disaster response agencies' resources, human service worker burnout and survivor's physical and emotional stamina.
- From May 15 to June 30, 1007 individual contacts were made between FEMA 1054 disaster survivors and Community Mental Health Centers (CMHC).
- New contacts are coming forward at a 10-15 new cases per week.
- Face-to-face counseling is averaging 45 minutes.
- People are feeling helpless and hopeless. Persons accessing counseling have intense needs. Due to the pocketed nature of the disaster, there is greater distance between impacted communities and Missourians affected by the disaster. Costs are higher, needs are greater but, fortunately, DMH has excellent services and disaster mental health counselors fine-tuned from experience with FEMA 995.
- DMH has contributed $205,693 in in-kind services and costs to the mental health recovery efforts of FEMA 1054 or 25% match to the total federal aid requested ($91,060 for Immediate Services Grant; $731,731 Regular Service Grant).

Department of Revenue

The Response and Recovery

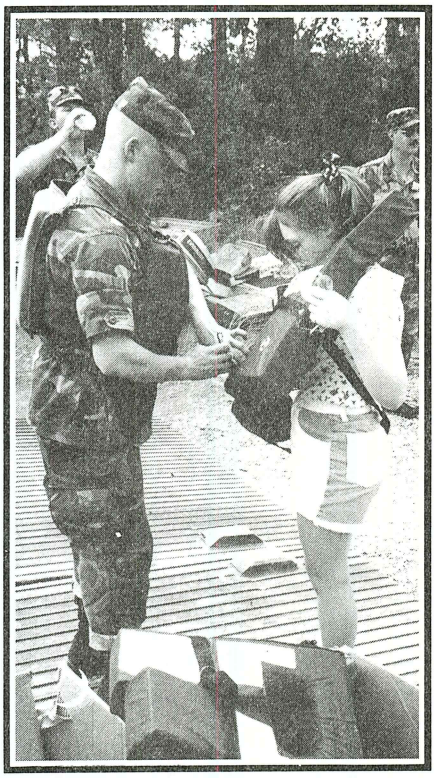
- Extended, upon request, the time and/or pay for individual and corporate taxes (including estimated income tax payments) for those individuals and corporations directly affected by the flood.

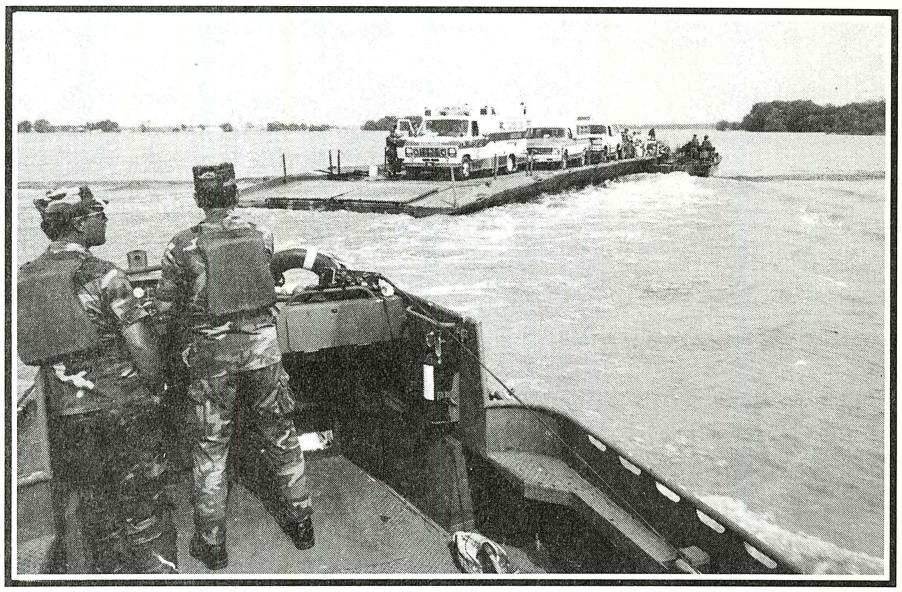
- Granted additional time to taxpayers under audit and/or investigation in flood areas.

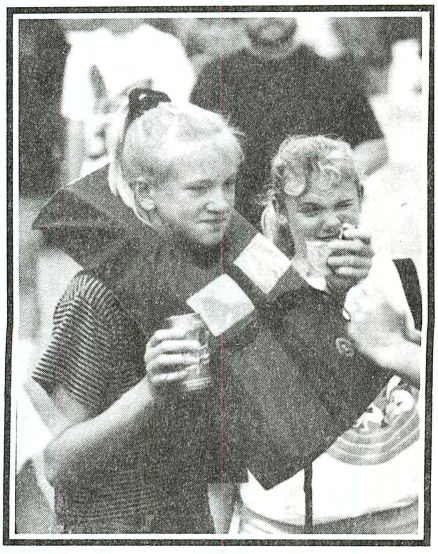
- Avoided contacting flood victims to set up new audits/investigations.

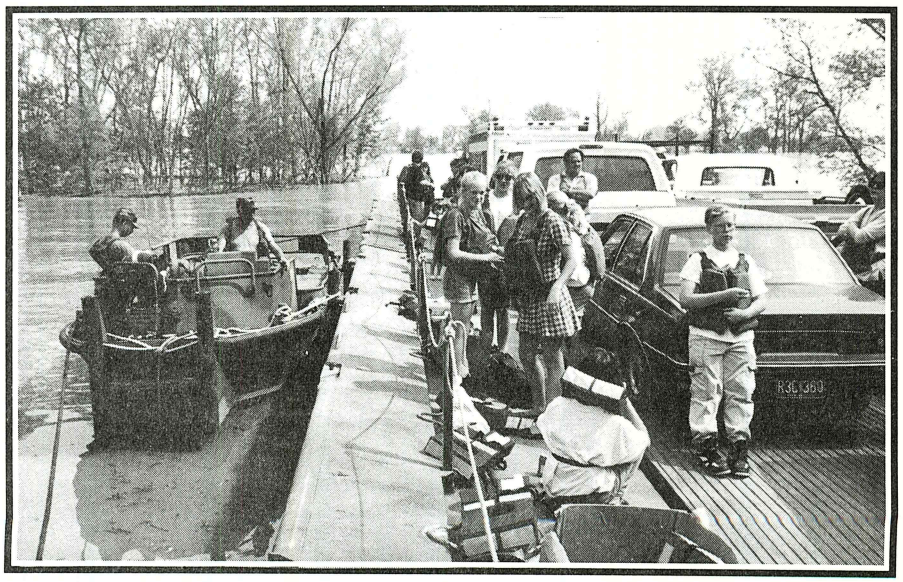
- Information and personnel were available to answer questions at all Department of Revenue offices.

The Guard's Portage Des Sioux Rafting Operations









Photos by Missouri National Guard

Department of Social Services

Division of Family Services

The Response & Recovery

The primary mission of the Division of Family Services was to ensure that resources were available for mass care of all Missouri citizens affected by the flood. The Division was in frequent contact with the State Emergency Management Agency (SEMA) assessing areas of need. This information was shared with the Department of Social Services and all its appropriate divisions at the state and local level. Contact was also maintained with USDA, area food banks and private sector entities such as Red Cross and Salvation Army.

In response to the needs of Missouri citizens affected by the flood and disaster workers in the disaster areas the following services were provided:

• Division of Family Services staff from the St. Louis County office staffed the Federal Disaster Relief Assistance Center (DRAC) to take applications for possible assistance benefits from June 21 - June 30, 1995.

• USDA commodity foods for mass feeding were made available to the Red Cross and Salvation Army from May 13 - July 19, 1995. A total of 8,274 pounds of USDA donated food valued at $5,388 was distributed for the preparation of 9,097 meals.

• In response to the July 4, 1995, tornado in Moberly, the Division of Family Services released to the Red Cross 727 pounds of USDA donated foods valued at $449 for the preparation of 4,371 meals.

• County Division of Family Services staff served on the organized local unmet needs committees to help assist disaster victims.

• County staff continued to operate and maintain all regular programs of DFS to ensure prompt and efficient delivery of services to its clients.

• Division of Family Services continued to be represented on the Governor's Disaster Recovery Partnership group.

Division of Aging

One component of the Division's primary mission is to protect the quality of life for Missouri's older adults and this is especially true in disasters. To effectively carry out this mission, the Division requests federal Administration on Aging (AoA) funds to assist the 10 Area Agencies on Aging (AAA). The funds are used by the AAAs to develop programs and services to meet the special needs of elderly disaster victims. Every disaster has its own unique characteristics and for a variety of factors unique to the elderly as they require more time to recover from disasters. In many instances, the AAAs found themselves in the midst of assisting survivors of the Great Mid-West Flood of 1993 when the multiple 1995 disasters, including the flooding occurred.

The Response

• Staffed the new pilot Disaster Recovery Assistance Center.

• Assisted in providing meals to homebound.

• Provided assistance with sandbagging homes and, where necessary, evacuation from homes.

• Contacted vulnerable elderly to assess needs and provide assistance with recovery benefits application and appeals process and/or referral.

• Conducted outreach efforts to locate elders who had not applied for assistance by distributing written materials, conducting town meetings and attending local Unmet Needs Committee meetings.

• Reactivated aging disaster communications network with 13 division regional offices and 10 AAAs to disseminate flood assistance information.

• Reactivated 24-hour division command post.

• Coordinated AAA relief efforts with AoA regional office.

• Submitted federal grant application for disaster recovery services.

• Assisted elderly in locating alternative housing.

• Consulted with other flood recovery agencies and AAA flood recovery advocates regarding special need and individual case resolution.

• Attended meetings and briefings with federal, state and local community agencies to obtain and provide information regarding flood recovery services.

• Closely coordinated activities with other agencies providing disaster recovery.

Problem Areas

New state law requiring legislative review of all federal grant applications delayed disaster fund application.

The total automation of the federal application assistance process may have adversely affected the numbers of elderly applying for assistance.

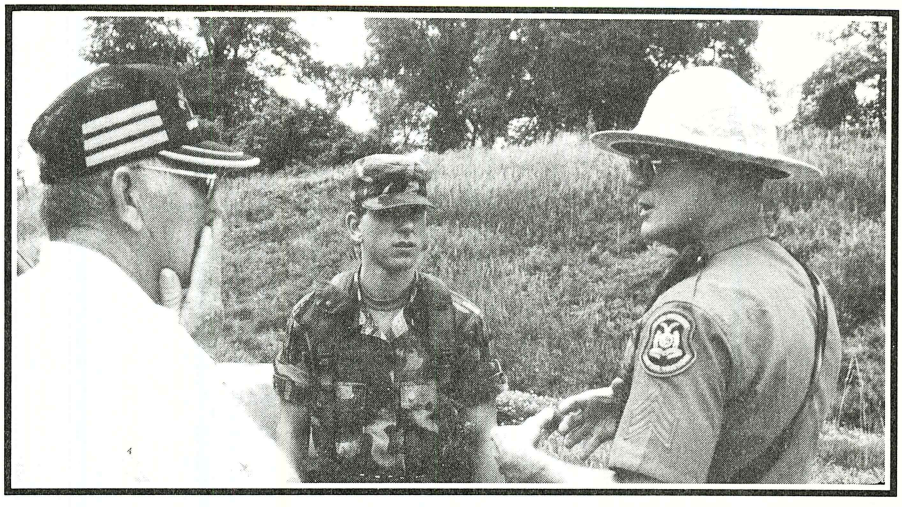
Recommendations

The federal application legislative review law should be revised to exempt federal grant applications for disaster funds that do not require state matching funds.

More federal, state and local community agencies need to develop and implement memorandums of agreement that will allow for the sharing of information to ensure elderly disaster victims in need of recovery assistance apply and receive needed services.

Department of Public Safety

The Department of Public Safety is responsible for coordinating statewide law enforcement for the purpose of ensuring a safe environment for Missouri citizens. The department is organized into 10 divisions. In a statewide emergency, five of these divisions and the Director's Office are response agencies. During a statewide emergency, the Missouri National Guard and the State Emergency Management Agency report directly to the Governor's Office once the Governor declares a State of Emergency (SOE) and the State Emergency Operations Center (SEOC) has been activated. Other divisions that have emergency response duties are: The Missouri Division of Fire Safety, Missouri State Highway Patrol and the Missouri State Water Patrol.



Division of Fire Safety

The Response & Recovery

Missouri has a "Statewide Mutual Aid Program" in the nine regions of the State. Each region pledges to respond to emergencies in other regions, supply other regions with manpower, tools, equipment and other coordinating services during an emergency.

The State Fire Marshall called Mutual Aid to assist different regions with emergency response situations. The Marine Task Force was activated for Region C; equipment and personnell support for Carrollton; pumps for Regions C, I, G, and E. Region B and C experienced flooding and received mutual aid.

Missouri State Highway Patrol

The Response

The activities of the Missouri State Highway Patrol were directed toward the response phase of the 1995 flooding. Basic services provided by the Missouri State Highway Patrol were:

- Provided several communications personnel to SEMA for use in the State Emergency Operations Center at the beginning of the 24-hour disaster operations.

- Provided information on road closings statewide

- Provided security patrols on roads affected by flooding, tornadoes and severe weather in various parts of the State between May 8 through July 4 tornado in Moberly.

- Provided traffic control at intersections on major routes associated with detours caused by the flooding.

- **Moberly, July 4, tornado** - provided 18 hour security shifts for several days for both the residential and commercial district in Moberly.

Once again, the cooperation between our agencies was excellent.

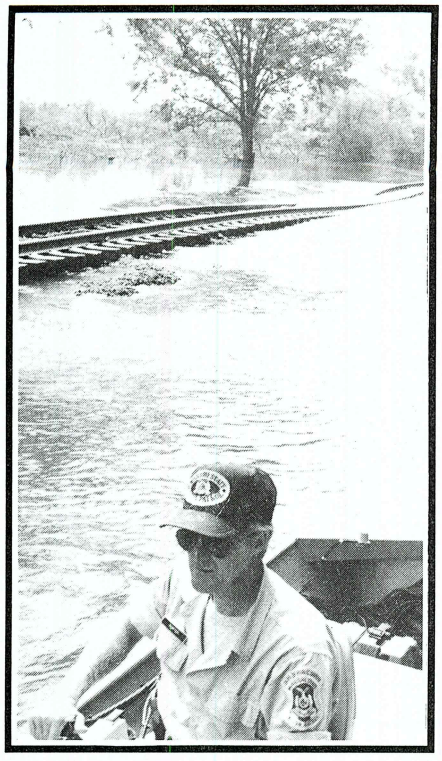
Missouri State Water Patrol

The Response

The Missouri State Water Patrol dispatched 25 officers to flood stricken areas of the State between May 15 and June 22, 1995. These officers worked a total of 1,447 hours of flood duty during that period. Our mission was to provide law enforcement and rescue support to local jurisdictions for the duration of the flood emergency.

The overall multi-agency response to the 1995 flood was very effective. There is no doubt that lessons learned from the 1993 flood were incorporated into the response effort in 1995. Lines of communication were established early when it became apparent that a significant flood was imminent in many regions of the State. Water Patrol officers that are assigned to waterways in flood prone areas worked closely with the local EOCs to assure that manpower and equipment assets were used to their full potential. There was a good spirit of cooperation between local, state and federal authorities.

The SEOC came on line early during the crisis to open lines of communication. They provided a very good situational log that was updated on a daily basis (sometimes hourly). The SEOC was informed as to the number and location of water patrol officers that had been dispatched to various flood stricken areas, particularly along the Missouri and Missis-



By Missouri Water Patrol

sippi Rivers. The response coordinators at the SEOC had a good understanding of what the patrol's capabilities and limitations were in terms of manpower and equipment. Requests for support were appropriate and appeared to be well thought out.

The Water Patrol responded to multiple flood locations throughout the State. Because the flood developed during the peak of the boating season, we did not have adequate personnel to conduct long term operations in flood areas as well as the regular patrol assignments on other bodies of water. Officers were required to work significant amounts of overtime in order to provide coverage in areas where officers were called out for flood duty. Our overall lack of personnel made it a challenge to perform both missions simultaneously.

Effective pre-planning, resource management, and an overall spirit of cooperation between agencies and individuals made the 1995 flood response a success.

Departments of Army and Air Force Headquarters of Missouri National Guard Office of the Adjutant General

The Response

The Missouri National Guard and the State Emergency Management Agency are located in the same building. At 11:35 a.m., May 17, the State Emergency Operations Plan was activated thus activating the State Emergency Operations Center (SEOC) on a 24-hour basis. During the afternoon of the 17th, Missouri Governor Mel Carnahan declared a State of Emergency. Missouri National Guard units were alerted for State Emergency Duty (SED) at that time. Units were activated at 0600, May 18 for duty based on requests from local governments to the Governor's office for assistance with flooding along the Missouri and Mississippi Rivers, severe weather and tornados. The units were controlled by the Adjutant General through the State Area Command (STARC) Headquarters in the State Emergency Operations Center (SEOC).

Operation Thunder River '95

The Missouri National Guard dubbed the 1995 flood as "Operation Thunder River '95". The Guard assisted in eight counties and 11 communities between May 18 through July 7, 1995. In the after action report to the Departments of the Army and the Air Force, the Guard reported total manhours were 2,575. Daily soldiers on duty ranged from six on May 17 when the SEOC was activated to a peak of 144 soldiers on duty on May 22. Over 100 guardsmen were on duty between May 21 through May 30, 1995. In June and July 1995, guardsmen on duty ranged from 85 on June 1, declining as missions were completed to one or two on duty in the SEOC in July. The total cost of the State Emergency Duty was $321,875.

The Response - Significant Missions

City of Nevada, Vernon County - Co. A (Det 1), 735th Spt Bn and the 118th Quartermaster Det performed a security mission and the 203rd Engr Bn rendered a debris removal assignment due to substantial storm damage to downtown Nevada between May 18-22, 1995.

City of Ste. Genevieve, Ste. Genevieve County - The 1140th Engr Bn was mobilized to provide engineer support to include the development of a surface on the upper crown of the Ste. Genevieve Levee District #2 due to high water from the Mississippi River between May 19-30, 1995.

City of Kimmswick, Jefferson County - On May 18, the 220th Engr Co provided flood lighting support to allow for round-the-clock river sandbagging operations on the Mississippi River.

Carroll County - Components of Co. C, 135th Sig Bn and Svc Btry, 1/129th FA were tasked with an evacuation mission in Carroll County on May 19-20.

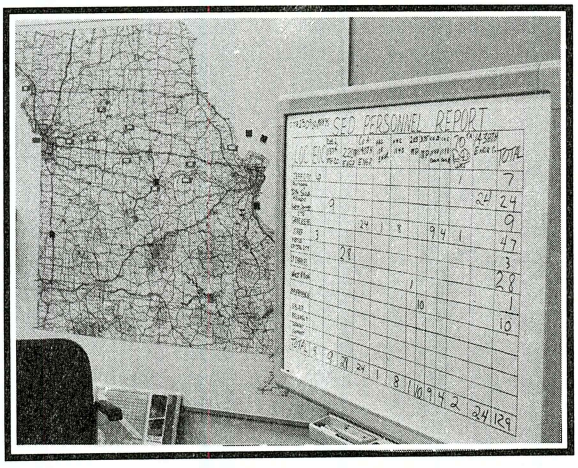
St. Charles County - A liaison officer from the Missouri National Guard was provided to the St. Charles County Emergency Operations Center between May 19 - June 6, 1995. Rafting operations were conducted at **Portage Des Sioux,** St. Charles County from May 21 - June 8, 1995 by the 1438th Engr. Co. The 3175th MP Co provided traffic control assistance to the **West Alton** area of St. Charles from May 21 - June 8, 1995.

Crystal City and Festus, Jefferson County - The 220th Engr Co supplied 24 hour operational traffic security at six intersections caused by high

water from the Mississippi River from May 20 - June 18, 1995

Hillsboro and Sulphur Springs, Jefferson County - Det. 2, 1137th MP Co executed a traffic control and roving patrol mission attributed to high water and tornado damage between May 22 - June 4, 1995.

Commerce, Scott County - The 1140th Engr Bn provided 24 hour security to the City of Commerce and



to Scott County Levee District #2 because of substantial flooding from the Mississippi River from May 23 - June 11, 1995.

Commercial and cellular telephones proved to be an expeditious means of communications between STARC EOC and the mobilized units. State issued credit cards were issued for pagers, in conjunction with cellular phones, were used to good effect in some areas.

No additional training was given to soldiers to perform the SED mission. The MONG experience from the flooding of the Missouri and Mississippi Rivers in 1993 and ongoing Junior Leadership Training proved to be beneficial to activated units.

Public Affairs Office was not heavily tasked due to joint MONG/ SEMA public affairs operations.

Morale and discipline were excellent throughout the flood emergency. The soldiers were wholeheartedly supported by the local communities and citizens.

Injuries -- A traffic accident involving two soldiers and a civilian vehicle occurred on June 4. An apparent drunk driver injured the two soldiers (one soldier badly bruised and the second incurred a fractured foot) in the accident. Both soldiers received civilian medical treatment and were released. During the operation, there were three other minor injuries which were treated by civilian medical treatment.

Local armories were used for billeting in all locations with the exception of operations in St. Charles County. Soldiers providing support to St. Charles County were billeted in a local school. Meals were contracted with local vendors. Fuel costs totaled approximately $11,110.

Problem Areas

This was the first large scale emergency operation conducted in the new State Emergency Operations Center (SEOC). Though the SEOC was operated efficiently and effectively, many lessons were learned concerning the integration of the new computer software systems into the SEOC operations.

Although the use of commercial and cellular telephones proved to be advantageous during the SED operations, problems were encountered due to the lack of familiarity with the new SEOC telecommunications package. This combined with the inadequacies of the current telephone software package hampered effective and timely telecommunications.

Though mission guidance was very specific as to support being provided and mission requirements, some local authorities attempted to add new missions or change the original mission guidance. This is a continuation of the observations and lessons learned from the Flood of 1993.

Activated units provided MONG PA officers excellent support in the field, yet some units failed to conduct local hometown media relations. While a PA guidance memo was fielded advising units to tell "the Guard story," the daily newspaper in one community did not know the local guard unit was on SED until notified by the MONG PA Officer. Emphasis is needed to remind commanders that SED is an excellent opportunity to have a positive impact on media relations, recruiting and retention.

Operation Twisted Limb '95

At 7:30 p.m., July 4, a tornado touched down in the city of Moberly, Randolph County, injuring 13 people and causing significant damage to both commercial and residential areas. On July 6, Gov. Carnahan issued a State of Emergency and activated the Missouri National Guard to assist local authorities with debris removal.

Moberly, Randolph County - 19 guardsmen from the 110th Engr Bn provided debris removal assistance to the city of Moberly from July 11 - July 21, 1995. This unit utilized 5 HMMWVs, 1 contact truck, 6 5-ton dump trucks, 2 10-ton tractors, 2 lowbow trailers, 2 scoop loaders and 6 chain saws. Total manhours were 212 hours. The approximate cost of SED for the Moberly area was $26,500.

Lessons Learned

Use of Missouri HQ STARC and PA officers to serve as joint SEMA/State Spokespersons in the SEOC proved to be beneficial. But if the scope of the SED operations were any greater than experienced in Operation Thunder River, MONG PA support to SEMA would not be available. SEMA must be prepared to supplement its PA staffing with non-MONG resources during any major or extended disaster. (SEMA PIO: It must be noted that the MONG Public Affairs officers assisted SEMA Public Information staff on two weekends in May -

19-21 and Memorial Day Weekend 27-29, 1995).

The MONG is composed of various units (Engr and MP) conducive for SED missions and operations. These type of units have been used quite extensively over the past two years for SED operations. These type of units possess specialized skills which enable the MONG to react efficiently and effectively to most state emergencies. Yet, when extensive SED operations are combined with normal unit mission tasks and other training requirements, the end result is unit "overload" or "burnout." These broad mission requirements and tasking have tried the patience of the soldier's family and employer. Commanders must be attentive to the overuse of these units and soldiers.

As previously stated, this was the first large scale emergency operation conducted in the SEOC. It was an excellent opportunity to work with many state and federal agencies all co-located in one facility. This allowed for direct communications and coordination with the affected agency that greatly enhanced the MONGs support operations. Operation Thunder River proved again that the MONG is prepared to react to most emergencies.

Guardsman building a levee in Southeast Missouri, by Mo. National Guard

State Emergency Management Agency (SEMA)

The Response

State Emergency Management Agency (SEMA) is an emergency coordinating agency during disasters. Local emergency managers are encouraged to use all local resources at their disposal during a disaster. SEMA maintains close and constant contact with local emergency managers to assess the local situation and to brief the Governor's Office. Once a local government's emergency response capabilities have been overwhelmed, the local government can turn to SEMA for assistance.

Normally, SEMA works within the Adjutant General's Office. During an emergency, SEMA reports directly to the Governor and coordinates State agency response to assist local jurisdictions in their emergency response.

In the 1995 flood, SEMA sent Preliminary Damage Assessment (PDA) Teams to work with local emergency managers gathering preliminary damage data which would be submitted to the Governor for consideration. Once the Governor issued a State of Emergency (SOE), State agency resources became available for local emergency response assistance. SEMA opened the State Emergency Operations Center (SEOC) on a 24-hour basis throughout the emergency response operations. Daily briefings were held, as often as, three times a day during the height of the emergency response measures. Some State agency emergency response teams operated out of the SEOC, while many others came for the daily briefings. Once SEMA began 24-hour operations the Missouri National Guard moved their emergency response operations to the SEOC floor. Volunteer agencies such as the American Red Cross and the Salvation Army also came to the SEOC for the daily briefings and to give an update on their services. All daily situation reports were faxed to State agencies, the Governor's Disaster Response Partnership and appropriate federal agencies. Two federal agencies sent representatives to the SEOC. The Corps of Engineers sent officials from both the Kansas City district and the St. Louis district to provide levee technical assistance for State and local governments. The Federal Emergency Management Agency (FEMA) sent a liaison staff member to monitor the State emergency response actions and to brief their regional office in the event the Governor might wish to ask for a disaster declaration.

After Governor Carnahan issued a SOE, a series of joint Federal-State PDA Teams started conducting regional surveys to determine the extent of

SEMA personnel manning the Duty Officer Desk in the SEMA section of the State Emergency Operations Center during the Spring 1995 Flooding Activation

damage the 1995 flood caused to public property and infrastructure. Teams also began gathering information on the impact to individual citizens and small businesses affected by the flooding.

On June 2, 1995, President Clinton announced a Presidential Disaster Declaration for Public Assistance. A SEMA State Coordinating Officer, and the SEMA Public Information Officer initially staffed the Federal State Disaster Field Office (DFO) in St. Louis. As the workload for public assistnace damage information began pouring into the DFO, SEMA Public Assistance staff rotated into the DFO to handle county requests for DPAs, survey reports, Notice of Interest on projects, and other paperwork related to the Public Assistance declaration. After the June 12, 1995 Presidential Disaster Declaration of Individual Assistance, members of the SEMA Individual Assistant staff rotated in and out of the DFO, the Disaster Recovery Assistance Center (DRAC) and the mobile DRAC.

The Recovery

The Individual and Family Grant (IFG) Program -- SEMA administers the Individual and Family Grant Program which is a component of the Individual Assistance program administered by FEMA. During the 1995 flood, 4,408 Missourians, living in 61 counties and the City of St. Louis, called the FEMA disaster tele-registration number to apply for Individual Assistance. If an individual was denied a low-interest SBA home or personal property loan, the application was sent to the IFG program for possible funding.

The applicants could obtain grants for minimal household repairs, personal property replacement, transportation replacement, disaster related funeral expenses, disaster dental work or medical expenses.

Many of the applicants in the 1995 flood had not sought assistance in the 1993 and 1994 floods. If they received grants for personal or real property losses, mitigation grants and lived in flood zone A (100 year flood zone), the applicant was required to purchase flood insurance. The IFG Program gave these applicants the first year's premium and stipulated they must keep the insurance in force to receive future assistance.

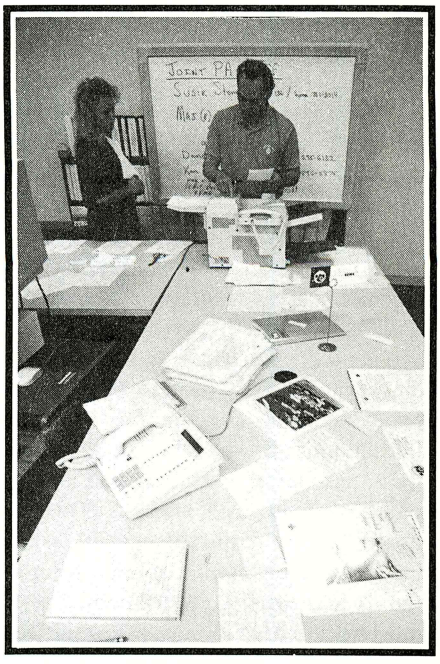
As of October 24, 1995, the IFG Program processed 1863 applications for assistant. Approving 852 of these applications totaling $1,011,502. There are four IFG cases pending a decision. The average IFG grant was approximately $2,000.

The Public Assistance (PA) Program -- SEMA administers the Public Assistance Program. During the 1995 flood, 42 counties received a disaster declaration of public assistance for damages to public facilities and infrastructure.

As of October 26, 1995, SEMA received 2063 Damage Survey Reports. As of October 6, 1995, the Public Assistance branch approved and obligated $9,497,812 in funding for 1910 different sites.

Missouri Community Buyout and Relocation Program (Hazard Mitigation) -- Based on the success of the 1993 Buyout Program in moving willing sellers out of harm's way in the floodplains, Missouri decided to continue the program as hazard mitigation funds from the 1993 flood became available.

Buyout communities that were flooded in both 1993 and 1995 did not have to operated emergency rescues, evacuations, sandbagging operations or allocated limited emergency response resources to areas that were purchased and demolished. Many city administrators estimated that they save thousands of dollars every day of the flooding by not having to run those emergency response



operations in the buyout areas. Additionally the citizens who lived in those areas were not applying for Individual Assistance because they were living out of the flooded areas in 1995.

Over 300 buyout applications were sent to prospective communities. SEMA received 16 applications for consideration. The federal hazard mitigation funds are based on 15 percent of the combined Individual Assistance and Public Assistance funding per declared disaster. Missouri would receive approximately $1.6 million in federal funds and used $1 million in general revenue funds for the State share of the match.

Three communities were selected based on the Governor's criteria: substantially damaged primary residences in the 100-year flood zone and the project had to be cost effective. The three communities Missouri selected and sent to FEMA for funding approval were Portage Des Sioux in St. Charles County, Commerce in Scott County and the City of Cape Girardeau in Cape Girardeau County. The three projects targeted 125 houses (which was half of the total number of homes targeted in all 16 applications). As federal funding becomes available from the completion of the 1993 Buyout Program, the funds may be used to assist applicants who were not approved in the 1995 buyouts.

Hazard Mitigation under Public Assistance -- Cost effective mitigation measures were included in some of the public assistance projects. These projects might range from installing culverts which would reroute storm water to raising public property above the floodplain i.e. a road.

Advisory Functions -- The SEMA deputy director conducted numerous phone conferences with the Governor's Flood Recovery Partnership to give the Partnership the most current disaster and recovery information.

Areas of Excellence

· SEMA staff was "geared up and ready to go" (almost methodically) once the Governor declared a State of Emergency. The staff once again gave 110 percent.

· Excellent coordination between State agency liaisons, the COE liaison and the FEMA liaison in the SEOC.

· Using the 800 FEMA disaster teleregistration number to register Individual Assistance applicants.

· The Missouri Community Buyout Program aggressively moved citizens out of the floodplains. In participating communities that were flooded in 1993 and 1995, city administrations were not spending money on emergency rescues, evacuations, sandbagging efforts or other essential city services to save lives and properity in the buyout area. It was a win-win situation.

Recommendations

· Continue to train and work with State agency responders for disaster response issues.

· Incorporate Softrisk communications into the SEOC management programs.

· Continue to develop digitized imaging procedures to augment existing records principally for levee information and for damage assessment.

· Form a cadre of State Public Information specialists to assist the SEMA Public Information Officer. The State PIOs could be rotated in to and out of the SEOC during disaster response and the DFO during disaster recovery.